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CONTENTS.

| | PAGE. |
|---|---|
| The Gold-Fields of Victoria | 109 |
| The Phœnix Mine | 109 |
| What is a "Known" Lode? | 109 |
| Tin in North Carolina | 111 |
| Charge of Judge Hallett in the Reynolds Case | 112 |
| The Copper Ores of the Southwest | 112 |
| The Great Tunneling Record | 114 |
| The Reliance Iron Frame Portable Stamp Battery | 115 |
| Production of Bessemer Steel Ingots and Rails in 1885 and 1886 | 115 |
| The Foreign Quicksilver Trade | 116 |
| A Volcano in the Baku Oil Fields, Russia | 116 |
| Iron Classification for Duty | 116 |
| Rapid Work on the Croton Aqueduct—The First Section Finished | 116 |
| Books Received | 116 |
| Patents | 116 |
| Personals | 117 |
| Furnace, Mill, and Factory | 117 |
| Contracting Notes | 117 |
| Labor and Wages | 117 |

| MINING NEWS: | PAGE. |
|---|---|
| Arizona | 117 |
| California | 118 |
| Canada | 118 |
| Colorado | 118 |
| Cuba | 118 |
| Georgia | 118 |
| Idaho | 118 |
| Illinois | 119 |
| Indiana | 119 |
| Iowa | 119 |
| Kentucky | 119 |
| Michigan | 119 |
| Mississippi | 119 |
| Missouri | 119 |
| Montana | 119 |
| Nebraska | 119 |
| Nevada | 119 |

| MINING NEWS: | PAGE. |
|---|---|
| New Jersey | 119 |
| New Mexico | 120 |
| Ohio | 120 |
| Pennsylvania | 120 |
| South Carolina | 120 |
| Tennessee | 120 |
| Texas | 120 |
| Utah | 120 |
| Virginia | 120 |
| Wisconsin | 120 |
| MARKETS: | |
| Metals | 120 |
| New York | 120 |
| Iron | 121 |
| New York | 121 |

| MARKETS: | PAGE. |
|---|---|
| Philadelphia | 121 |
| Pittsburg | 122 |
| Louisville | 122 |
| Coal | 122 |
| New York | 122 |
| Buffalo | 122 |
| Boston | 123 |
| Pittsburg | 123 |
| FINANCIAL: | |
| Stocks | 123 |
| New York | 123, 125 |

| FINANCIAL: | PAGE. |
|---|---|
| St. Louis | 126 |
| Pittsburg | 126 |
| Gogebic | 126 |
| FREIGHTS | 126 |
| ASSESSMENTS | 126 |
| DIVIDENDS | 126 |
| MEETINGS | 123 |
| CONTRACTS OPEN | xix |

Advertisers' Index ..... xvi

WE have just received the reports of the mining registrars of the gold-fields of Victoria for the quarter ended September 30th, 1886. As usual, these reports are very complete, and contain a great deal of detailed information of interest to those engaged in mining in that colony. From the figures, however, it would seem that the gold production continues to fall off very considerably, especially in the alluvial deposits. The increase shown in the products from quartz mining, while encouraging, does not compensate for the whole losses. The total production of gold for the quarter was 169,089 ounces, as against 176,159 ounces for the same period of 1885, and 206,598 ounces for the year 1884. Of the above production, 61,998 ounces only were derived from alluvial deposits, the remaining 107,091 ounces having been obtained from quartz mining. The total value of this production from the data given would be $3,217,763. During this same period, dividends to the amount of $666,075 were paid out. We again note the entire absence of any general statement showing at a glance the statistical features of these Victoria reports. In order to obtain any summary, all the tables have to be looked over, and the figures from each section collected to make up the general totals.

## THE PHŒNIX MINE.

This property is being quite extensively advertised, by puffs and special telegrams, in our exchanges. The company, as we have already stated (ENGINEERING AND MINING JOURNAL, January 22d), has a capital stock of $500,000, in shares of $1 each. The property appears to be in litigation, and whatever its intrinsic value might be, it would be a very unwise investment at almost any price until the title is made perfect.

The mine is represented by those interested in it to be extremely valuable, but these statements appear to have a very slender foundation. The mine has been reported on by several experts, among whom are the well-known engineers, Messrs. W. P. BLAKE and Prof. GEORGE W. MAYNARD, gentlemen whose reports carry great weight. A well-informed correspondent says that the report of Professor MAYNARD in no way justifies any such figures as are now nominally quoted for the stock—nominally, we say; for there is a very general belief that the reported sales at the figures that would make the mine worth from $3,000,000 to $7,000,000 are what are known on the street as "washed' sales.

Professor MAYNARD'S report states that the vein has been proved for a length of 400 or 500 feet on the surface, mostly by shallow exploration-pits; that it has on the highest portion of the outcrop a shaft, C, 36 feet deep, not considered worth sampling; a shaft, B, 79 feet deep, down to the upper tunnel; this shaft shows a vein of from 4 to 7 feet of quartz, which samples in gold $3.31 a ton, or, in other words, is without value; an upper tunnel that shows a width of vein counted by Professor MAYNARD as 30 feet in width, only the best portions of which were sampled and gave an average of $2.44 per ton in gold, which no one would think of calling profitable rock; and the Shipman tunnel, a cross-cut tunnel, which is "the most important development" on the mine. This tunnel is 110 feet below the upper tunnel, and cuts across a body of quartz 104 feet in thickness, only 23 feet of which was pay ore; these 23 feet sampled $12.30 per ton in gold; the remainder, 81 feet, gave only $2.34 per ton. No levels are driven out on the vein to show the length of the pay-chute, and no winzes or shafts sunk, so that the entire value of the property is based upon this sampling of 23 feet of a cross-cut tunnel; while the shafts and tunnels above this on the vein, and lower down at the north end of the property, show no pay ore whatever.

Professor MAYNARD, in his accustomed careful manner, gives the facts as they are, without coloring, and justly says: "The ground has not been so blocked out by shafts, drifts, and winzes that ore technically in sight can be spoken of." And yet we think that he and the other experts have taken altogether too favorable a view of the case in assuming that the pay ore extends upward or downward from the single cross-cut in which it was found, to those above and below, which carried only worthless quartz carrying from $2 to $3 a ton.

It is true that the Phœnix is a favorable *prospect*, worth exploring and testing, and that it may possibly develop a large body of paying ore; but it certainly is not a mine worth millions, or, even at the present showing, worth the $500,000 at which it is capitalized: and the present effort to "boom" the stock is not only wholly independent of the value of the mine, but is directly contradicted by the facts reported by Professor MAYNARD, and is condemned by Professor BLAKE, who telegraphs the New York *Tribune* as follows:

"SIR: I have seen the interview in the *Tribune* with President Jemison on the Phœnix mine. He gives a garbled paragraph from my statement last March, the use of which is improper, misleading, and unauthorized. I am not responsible for extravagant overvaluation and capitalization, and protest against the use of my name. WILLIAM P. BLAKE.

"WHIPPLE BARRACKS, ARIZONA, Feb. 10."

In the face of the facts, as reported by these distinguished experts, it is scarcely necessary to say that the reported transactions in the Phœnix stock are not based on value, and that they should not mislead the most simple lamb.

We beg to call the attention of the managers of the New York Stock Exchange to the disgraceful transactions in "unlisted securities at the Stock Exchange," which are rendered dangerous by the semi-official character they assume in using the name of the Exchange.

Several of the concerns thus dealt in, if not pure swindles, are still quite as mischievous as most of the wild-cats with which the "boys" amuse themselves at the Petroleum, Stock, and Mining Exchange.

## WHAT IS A "KNOWN" LODE?

Among the judicial constructions of the United States mining law, one of the most important in its consequences is contained in the charge of Judge HALLETT, of Colorado, pronounced at Denver, January 27th, in the trial of the case of the *Iron Silver Mining Company* vs. *Reynolds et al.*, which we publish in full in another column. The view taken by Judge HALLETT is surprising, both because it ignores and contradicts the opinion of Judge MCCRARY in the *Sullivan* case (to say nothing of various other decisions and rulings), and because it deals with the letter of the statute in a novel and unexpected way.

The history of the case, in brief, is as follows: The plaintiff brought

an action to recover possession of ground included within its patented placer claim. The defense was, that this ground was part of a lode, known to exist within the placer claim at the time of application for patent, but not mentioned in that application, and, therefore, by Section 2333 of the Revised Statutes, reserved from the grant of the patent. On the first trial of the case, Judge HALLETT directed a verdict for the plaintiff, on the ground that, even if the lode had been thus "known to exist," and therefore had not been conveyed to the plaintiff by the placer patent, still the defendants had shown no title to it, and were, therefore, to be regarded as naked intruders. On appeal to the United States Supreme Court, this decision was reversed, and the case was sent back for a new trial. The Supreme Court took pains to avoid expressing any opinion on the merits, or even on the definition of the words, "known to exist," in the statute. It said, "Whether this knowledge must be traced to the applicant for the patent, or whether it is sufficient that it was generally known, and what kind of evidence is necessary to prove this knowledge, we need not here inquire." And it held Judge MCCRARY to have committed an error in the *Sullivan* case, by volunteering an opinion on this point which was not necessarily called for by that case, as it was presented.

Evidently the *Reynolds* case, as re-tried at Denver last month, turned wholly on the question whether the lode in controversy had been "known to exist" within the placer claim at the time of the application for the placer patent. What evidence was adduced before the jury, we do not know. On the previous trial, the proof offered of such prior "knowledge" was very meager, and far from direct. Nothing more was even attempted than to prove the existence of a belief and hope on the part of somebody connected with the placer application, that the placer claim would be found to contain a lode. We infer from the charge to the jury, in the present case, that nothing more than that has now been shown. However, the jury has found, on the strength of the evidence and under the influence of the charge, that the "lode" was "known to exist" as per Section 2333; and the verdict has been given to the defendants. With that result we have nothing to do. We are concerned only with the principles laid down by the court for the guidance of the jury; and these we purpose to analyze. A more extended discussion of the whole question stated in the title of this article will be found in the writer's recent paper, "Lode Locations," read at the Bethlehem Meeting of the Institute of Mining Engineers; and an account of this case was editorially given by us in the JOURNAL of April 3d, 1886. We do not intend to go over that ground again in the present article.

Judge HALLETT begins by declaring that in the acts of Congress veins and lodes or placers are "not sufficiently defined for the purposes of this suit," and cites a number of definitions of "placers" from scientific authorities. But the definition of a placer, whatever it may be, has no bearing on the case. Section 2329 of the Revised Statues distinctly includes under the deposits subject to placer location *not only placers*, but "all forms of deposits excepting veins." Judge HALLETT has won some reputation by his exact definitions of veins. But every time he has narrowed the meaning of that term, he has enlarged the boundary of the great remainder. Whatever is not subject to location as a lode claim is expressly made subject to location as a placer claim. Judge HALLETT need not seek scientific authority on this point. He is himself an authority. He might well have recited to the jury some one of his own careful definitions of a lode, and added, "Gentlemen, *every thing else* in the way of an ore-deposit is classed by the law with placers."

It is therefore not at all pertinent to inquire whether the deposit within a placer location is alluvial, or even superficial. A placer location is simply a "square location," taken upon a deposit which is not a lode. If it is a hill-side covered with "float-rock," or a series of irregular bodies or impregnations which can not be located as a lode, the placer location is valid, not because COTTA calls such deposits placers, but because the law says they shall be treated like placers in this special proceeding.

But we do not observe that Judge HALLETT questions outright the validity of the placer location in this case. On the contrary, he evidently conceives it to be valid, except as to lodes "known to exist" within it, when it was applied for. We see, therefore, but one application for all the scientific lore about placers which he has introduced, namely, to base upon it the argument that, since silver is "not found in placer ground," the locators of this placer claim must have expected to find silver lodes in it. We shall recur to this conclusion presently. Meanwhile, we pause, in passing, to suggest that if Judge HALLETT had considered the history of the Comstock lode, he might have modified his logic. The Comstock was worked as a placer long before it was developed as a lode. If our present laws had been in operation thirty odd years ago, the ground would have been located as placer ground, and the subsequent discovery of the lode would not have affected the ownership. It would have belonged to the placer claimants.

Or Judge HALLETT, who is familiar enough with Leadville conditions, might have ignored COTTA'S negative declaration about silver in placers, and put himself on record as a better authority, by mentioning the notorious fact that argentiferous lead carbonate was found in abundance in California Gulch, and thrown out from the sluices as worthless. It was cruel of him to quote a deceased geologist of the last generation, and of a distant country, to prove that silver is not found in placer ground, in the face of the fact that, if silver had *not* been so found, the whole Leadville silver industry, including the case before him, would have had no existence!

Let us here call attention to the circumstance that the "lode" concerned in this suit is simply the well-known "contact," extending over so large an area around Leadville, and determined in innumerable litigations to be sometimes a lode and sometimes none, according to the views of courts, juries, and experts. Its existence within the Wells and Moyer placer claim, at the time of application for patent, had not been proved. It could only be inferred.

Now Judge HALLETT goes so far as to instruct the jury that the *intention* of the placer claimants to acquire title to a lode which they believed *would* be discovered in that claim is a knowledge sufficient to exclude a lode afterward discovered from the grant of the patent. He speaks of "a belief of the existence of a valuable lode therein which would amount to knowledge under the statute;" and again he says, "If it appear to you that the purpose was to secure such lodes or veins as might be found on the mountain within the limits of the placer claim, such purpose can not be effected in any such way." Finally, he declares that the conduct of the parties, apart from any expressed intention, may be taken as fair ground of inference as to their intention.

Apparently not only the lode now in controversy, but all other lodes within the claim, are to be denied to the plaintiff, if the jury chooses to infer that he intended to own them. There are several obstacles in the way of this doctrine, the chief of which appears to be the law itself.

The application of Judge HALLETT'S views in practice (if the law permitted) would lead to some curious results. A great many lodes are found in the working of surface deposits. A class of these deposits, known to technical literature as "deposits of *débris* in place," is due to the disintegration of the upper portions of lodes. Judge HALLETT has steered more than one jury to the conclusion that such disintegrated material is not "in place," because it is not "in the mass of the mountain." We have sufficiently indicated on former occasions our dissent from this opinion; but the miners of Colorado are obliged to accept it in practice, as we do now, for the sake of argument. If such an exposure of ore-bearing material is not in place, it is, by Judge HALLETT'S repeated rulings, not a lode; and hence by the statute it is subject to location as if it were a placer. With what reason can Judge HALLETT, after denying to the discoverer the right to locate it as a lode, tell him that, if he locates it as a placer, and digs away on it, so that a jury can infer from his conduct that he means to find a lode if there is one, that lode and all other lodes thus found within his claim are the property of any body else who chooses to "jump" them?

Even technical placers, or "*débris* deposits of accumulation," cover lodes as a general rule; and many such deposits, not profitable in themselves, have been located and worked for the purpose of exposing the lodes underneath them. The Australian synonym for lode, "reef," is a proof in language that the quartz veins of Australia have been largely found as rocky reefs crossing the beds of streams which have been rendered auriferous by their disintegration. Is a jury to be allowed, when a man locates such a placer, to infer from his conduct whether he was really after the lode, of the existence of which he had "a belief amounting to knowledge," rather than the placer which was his professed object? And if, instead of washing the placer dirt, he digs down to find the lode, with the purpose of owning it, is he to be told that "such purpose can not be effected in any such way"?

Or, suppose a lode claimant, finding "surface-float," disintegrated ore-bearing material, etc., but no lode, in the vicinity of the one he has located, applies for a placer patent, carefully obeying Section 2333, and describing his lode claim, and obtains a patent for the placer claim including the lode claim, as the statute provides. According to Judge HALLETT, he must not have, *or act as if he had*, "any purpose to secure such lodes or veins as might be found within the limits of the placer claim." All other lodes, except the one he has described, he must forfeit as fast as they are found, if it can be inferred that he expected to find them.

But the charge is bolder yet. Under the "conduct" from which "belief" is to be inferred, it includes the topographical situation of the claim itself. Judge HALLETT says, "If the application had been limited to California and Eureka gulches, and some reasonable space adjacent thereto, which it might be supposed contained such valuable deposits as had been worked out in the gulches, no question could arise in respect to the matter; but when the outlying territory beyond these gulches which contains nothing in the nature of a placer deposit, and is apparently valuable only for the ores or minerals which may be found beneath the surface within the country-rock in the form of veins or lodes, is embraced

in such an application, what shall be said of the purpose of putting in such outlying parts?"

Here, it will be seen, the court professes to know, not only at this moment, but to know that it was known years ago, and that the plaintiff had knowledge then, that the ores or minerals found beneath the surface mentioned would be in veins. The fact is, Judge HALLETT has worked himself into the notion that any ore not in an alluvial placer must be in a lode. He has forgotten that the law explicitly provides for other "forms of deposits." He is apparently ignorant of surface deposits not alluvial. In short, he has a "belief," not "amounting to knowledge."

To recapitulate the steps of this instruction, we may state them in logical order as follows:

1. A placer claim must contain a placer, that is, an alluvial deposit of *débris*, and (with a single exception, in favor of "ancient rivers") this must be superficial. As we have shown, this assumption receives no shadow of support from the statute, which classes all other forms of deposits, except veins, with placers.

2. The intent to acquire title to a lode which "may exist" within a claim for which application has been made under Section 2329, "could be formed only upon investigation as to the character of the ground, and the belief of the existence of a valuable lode therein which would amount to knowledge under the statute." Here we have belief, inferred from intent, made equivalent to knowledge! But why could not an intent to acquire a lode which "may exist" be found without investigation or belief?

3. This intent may be again inferred from circumstances. If the court tells the jury that the placer claim would have been very good in some other place, but not in that place, the jury may infer from the location of the placer claim a surreptitious intent from which is to be inferred a belief, which amounts to knowledge. After such an array of cumulative inferences, the court inquires, "What shall be said?" And any well-regulated jury replies promptly, "Verdict for the defendant!"

4. The unexpressed but logical conclusion of the court is, that the placer patent is void for fraud. If the rest of the charge is sound, that conclusion can not be escaped. For, on the hypothesis that the placer patent is valid (which Judge HALLETT seems inconsistently to hold), pray how could the patentees have complied with Section 2333? That section prescribes what shall be done as to a lode "known to exist." The claim must be shown, surveyed, and paid for. But it makes no provision for lodes believed to exist, even with that remarkable sort of belief which "amounts to knowledge under the statute." What quantity of belief amounts to knowledge elsewhere, is a question we are not obliged to pursue. But the belief amounting to knowledge *under the statute* is fortunately defined by the very requirements of the statute. It must be a belief permitting the sworn statement that the lode exists within the placer claim, and an application for the lode *claim*, of a certain width and area, and the payment therefor of the double price of $5 per acre. Can a man describe his "intent," with 25 feet on each side of it, and pay for it by the acre?

There is no escape from this corner, except the declaration (which Judge HALLETT does not make) that a placer patent, not shown before him to contain some other form of deposit than a vein, is void if it contains a vein not mentioned in the patent. For the law directs that application shall be made for a lode "known to exist;" and if the lode is not so known to exist that application can be made for it, then there is no "knowledge" of it "under the statute," Judge HALLETT'S "belief" to the contrary notwithstanding. The penalty of losing the ownership of the lode is imposed on the placer claimant for failure to make application for it. If he could not possibly make such application, then this penalty can not possibly be applicable to him. He must be punished for his evil intent or his wicked belief or his ignorance of COTTA and LE CONTE by taking away his patent: he can not be reached under Section 2333.

As we have elsewhere argued, the construction of Judge MCCRARY, that a "known" lode under this section must be a discovered, claimed, and located one, is the view most consistent with the letter of the law, and practicable in application. It is possible that direct proof of the discovery of a lode, made by, or known to, the placer claimant at the time of application, might be held sufficient, even though the lode had not been located. It is possible that a notoriously known lode, as, for instance, one which had been worked and abandoned and had fallen again into the public domain, might be held, without proof of its location or proof of positive knowledge of it on the part of the placer applicant, to be something which he ought to have known, must have known, and legally did know. But these kinds of knowledge are far enough from the vague and shadowy substitute set up by Judge HALLETT.

We have always been ready to give Judge HALLETT credit for good intentions. It has fallen to his lot to administer the mining law in a very difficult series of cases. The law itself is a bad one, and ought to be changed. Judge HALLETT knows this as well, and has said it as frankly, as any body. The temptation to construe such a law so that it shall mean something different from what it says, is very strong. No doubt this forced construction was attempted in the present case in the supposed interest of equity, and to prevent what was deemed to be an evasion of the purpose of the law. Nevertheless, it has only added mischief to confusion, and made a bad matter worse.

So far as the equity of this case is concerned, we have already said that we have nothing to do with that, apart from the principle laid down by the court. The meritorious character of either party is an outside matter. Still, as a mere matter of contemporaneous history, the experience of Mr. WILLIAM H. STEVENS, and his grantee, the Iron Silver Mining Company, in attempting to obtain and then to maintain legal title to mining property at Leadville, is striking enough. The whole silver mining industry of Leadville owes its origin to the faith and courage of Mr. STEVENS, more than of any other man; and the manner in which courts and juries have treated him and his associates is a startling proof that the more patiently and earnestly a man tries to secure a good title under the mining law, by priority of location, by careful surveys, by thorough developments, by the purchase of conflicting claims—the worse it is for him. The Iron Silver Mining Company has been plundered by litigation almost beyond belief. Every body has "jumped" its claims. If it pleaded the "apex" which Mr. STEVENS had spent many months in tracing and locating, then the apex was not "in place." If it pleaded a thousand feet of underground exploration, then the lode was not continuous. Its extra-lateral rights have been cut off in all directions for all sorts of reasons. When the outcrop of its deposit went round a corner, and its surveyor, trying to comply with Circuit and Supreme Court decisions and Land-Office rulings, made a nondescript geometrical figure of a location, it was beaten on geometrical grounds. And now, having to protect itself by placer patents, it is punished for "intent" and for disregard of scientific classifications. It seems a pity that, having suffered so many times under strict construction of the law, in spite of geology, this company should not now have the benefit of the same treatment, in a matter which the law itself has removed beyond the reach of geology.

## TIN IN NORTH CAROLINA.

Correspondence of the Engineering and Mining Journal.

The discovery of tin-stone in North Carolina some three years ago does not seem to have led to any definite result. In spite of the fact that no large lumps were found, as were found in the Black Hills, it seems to me that the indications were good. The few specimens that were found came from King's Mountain, on the Charlotte & Atlanta Air-Line Railroad, in the southwest corner of Gaston County. A piece in my possession shows the cassiterite on fine-grained quartzite. Some little stir followed the announcement of the discovery, and it was said that a company had been organized to prosecute the search. I have heard that some prospecting was done; but if tin ore was found in any quantity, the public was not informed of it. It does look as if the news of any valuable discovery would have leaked out before this, and I am afraid that we shall have to conclude that the ore was not found in payable quantity. Cassiterite is so easily separated from its gangue that it does not require a very high percentage to yield a profit. At Altenberg, as is well known, the zwitter contains only from one third to one half per cent of tin; and at Geyer, the veins carrying tin ore are from one half to four inches wide. Geologically, the King's Mountain District is of the right sort for tin, a mass of granite protruding through quartzites and clay slates, accompanied with talcose micaceous schists. According to Blake (ENGINEERING AND MINING JOURNAL, Vol. XXXVI., page 145), the formation in the Black Hills tin district is quite similar; and where a little tin has been found, and the geological formation is favorable, we might expect to find more. Be that as it may, tin has not been found there yet in any quantity. From all the surroundings, I am inclined to think that the mica districts of this State offer the best prospects for tin. Professor Blake's description of the Black Hills tin deposits may be applied almost literally to a great part of Mitchell and Yancey counties, on the north of Asheville, and to Macon, Cherokee, and Jackson counties to the south. There are found the same granite domes, surrounded by fine-grained micaceous sandstones and mica-schists, and the same garnet slates. Moreover, the mica veins are large and well developed, and yield excellent mica. It was in prospecting for mica that the first large pieces of tin-stone were found in the Black Hills, in almost exactly the same conditions as are found in the mica counties of North Carolina, where, however, tin has not been found. Of course, it can not be said that, because tin is found in the Black Hills under such and such conditions, it is always found under those conditions. But the fact that, in many places in the world, tin occurs under the geological and stratigraphical conditions that are found in North Carolina, certainly lends probability to the hope of finding it here. This, taken in connection with another fact, namely, that many parts of our mountain counties are practically unknown regions, will bear me out in saying that, if tin is found in North Carolina in paying quantities, it will probably be in some of the mica counties. Some ores, however, are very unreliable, and refuse to present themselves where we think they should be. Some years ago, I knew a man who for twenty years had been digging a hole in the side of a mountain in Henderson County, North Carolina, expecting to find silver. Nothing on earth could persuade him that silver was not there, and for aught I know, he may be digging away still.

Is the King's Mountain Tin Mining Company digging away at its hole? If so, I hope it will let us hear from it.

W. B. PHILLIPS.
UNIVERSITY OF NORTH CAROLINA,
CHAPEL HILL, Feb. 6, 1887.

## CHARGE OF JUDGE HALLETT IN THE REYNOLDS CASE.

Whether plaintiff has title to the lode in controversy, is the question in this case, defendants having failed to show any title whatever, other than such as may arise from possession.

Plaintiff's title is derived from Thomas S. Wells and William Moyer, under a patent issued to Wells and Moyer, dated March 11th, 1879, upon an entry made July 22d, 1878.

In the acts of Congress, and in the statutes of the State relating to such matters, a distinction is made between vein or lode locations, and placer locations, and the manner of acquiring title to them, which must be understood in order to come at the real matter in issue between the parties.

In these acts, veins and lodes or placers are not sufficiently defined for the purposes of this suit, and we must look to other sources for such definitions. As to placer locations, authors of recognized authorities are quite explicit, and it will only be necessary to read from several of them.

Von Cotta says (page 23), "It is well known that gold, platinum, tin ores, and many precious stones are very frequently found in loose aggregates on the surface of the earth, in which undoubtedly they were not formed, but were brought there by the destruction of other deposits. These deposits have been called *surface deposits*, *placers*, or *washings*; this last, because the metallic particles or gems are obtained from the bed by various manners of washing; and also because the concentration takes place by means of a natural crushing and dressing."

"All surface deposits have been formed by the destruction of some other kind of deposit."

Le Conte says (page 232), "If a mountain slope, along which outcrop auriferous quartz-veins, be subjected to powerful erosion by water-currents, then in the stream-beds will be found gravel-drifts composed mostly of the country-rock, and partly of the quartz vein-stones. Among the gravel will be found particles of gold, washed out from the upper parts of the vein. By the sorting power of water, the heavy gold particles are apt to accumulate mostly near the bed of the gravel-deposit (bed-rock). These gravel-deposits are the *placers*. In these, the gold particles, like the stone-fragments, are always *rounded* and *worn* by attrition." (Page 555), "The placers of California, however, are of two kinds, namely, the ordinary or superficial placers and the *deep placers*. The superficial placers are the gravel-drifts in the present river-beds. The deep placers are gravel-drifts in *old river-beds*. These old river-beds, as already stated (pages 238,529), are in many cases covered up with lava. In some cases, the general direction of the old bed coincides with that of the present river system, but more commonly the present river system cuts across the old river system. In all cases, however, it is evident that the old river gravels were formed before the lava-flow, and the newer gravels after the lava-flow. In all cases also, the present river system has cut down *far below the old beds*, in this respect entirely different from the old river-beds of the eastern portion of the continent."

Speaking of superficial deposits, Whitney says (page 34), "These comprise all deposits of the metals and their ores, which lie loose upon the surface, or intermingled with the superficial formations, the drift, and the alluvial. They are made up of particles and rounded fragments which have originally formed a part of some bed or vein, and from which they have been detached by various causes similar to those which have produced the great masses of clay, sand, and gravel, which almost everywhere cover the rocks in place. Such metalliferous deposits are usually called 'washings' or 'stream-works.'"

Such a deposit, existing commonly in the alluvium of streams, and along their courses and often on the sides or elevated plateaus of the mountains, in the loose material of the surface, is easily distinguished from a lode or vein, which is a body of ore or mineralized rock in the general mass of the mountain.

When they are associated with a lode or vein in the same territory, the placer is on the surface of the rock which forms the matrix of the lode or vein; the bed-rock of the placer becomes the dividing line between the two deposits, and they are distinguishable in elevation as in other characteristics already mentioned.

As to each form of deposit, provision is made in the act of Congress for acquiring title from the government; but the quantity of land which may be taken in a placer location is much larger than that which may be acquired in a lode location, and the proceedings for acquiring title differ in some particulars, to which it will not be necessary to refer in detail.

It is, however, provided in Section 2333 of the Revised Statutes, that in an application for a patent for a placer claim, when a vein or lode is known to exist within the claim, the application shall be made "with the statement that it includes such vein or lode, and in such case a patent shall issue for the placer claim, subject to the provisions of this chapter, including such vein or lode."

And where "a vein or lode is known to exist within the boundaries of the placer claim, an application for a patent for such placer claim which does not include an application for the vein or lode claim shall be construed as a conclusive declaration that the claimant of the placer claim has no right of possession of the vein or lode claim; but where the existence of a vein or lode in a placer claim is not known, a patent for the placer claim shall convey all valuable mineral and other deposits within the boundaries thereof."

The effect of this section is to exclude from the operation, and to exclude from the grant of a patent for a placer claim, any vein or lode, the existence of which was known to the patentee at the time of the application for the patent; so that such vein or lode remains the property of the government, or of any citizen who may have acquired title to it in the same manner and to the same extent as if the grant had not been made. In other words, as between the patentee of the placer and the government, or other claimant of the vein or lode, it is in the same situation as if the patent had not been issued.

In this instance, the existence of the lode at the point in controversy under the placer seems to be denied by plaintiff's counsel; but there is nothing in the evidence to support that denial. That there is a body of ore with defined boundaries in the general mass of the mountain in that locality, is sufficiently established; and the case turns upon the point whether its existence was known to Wells and Moyer or to Stevens, at the date of the application for patent. It is shown in evidence that Wells and Moyer, in making the application for patent, were acting as the agents of Stevens and Leiter, their grantees, the latter having purchased from them before the application was made, and therefore it is sufficient if it appear that the existence of the lode was known to Wells and Moyer or to Stevens, or to all of them, at and before the time of the application for patent. Was it known to them, or to any or all of them at that time? And if known, how known? What means of knowledge must the parties have had to charge them with notice of the lode?

Counsel for plaintiff contend that they must have ascertained by actual exploration within the limits of the placer that the lode existed there, or that there must have been an outcropping of the lode within the limits of the placer, which could be seen by all observers. But such a rule would be unreasonable and wholly defeat the intent of the statute. In this instance, it seems to be unnecessary to declare what circumstances may be sufficient to affect a patentee with knowledge as declared by the statute; for if in any case it appear that an application for a patent is made with intent to acquire title to a lode or vein which may exist in the ground beneath the surface of the placer, it is believed that a patent issued upon such application can not operate to convey such lode or vein. That intention could be formed only upon investigation as to the character of the ground, and the belief of the existence of a valuable lode therein which would amount to knowledge under the statute. If we look to the circumstances developed in the evidence, we shall find that they tend strongly to the conclusion that the application in this instance was of that character. Wells and Moyer were placer miners in California Gulch and in Eureka Gulch, long before Mr. Stevens and his associates acquired title to the premises; their operations had been confined to California Gulch and to Eureka Gulch, and some slight explorations on the hill-side. Upon the purchase by Mr. Stevens and his associates, the claims were extended in a westerly and a southerly direction, to a great distance, and over territory which had not been before that time occupied for placer mining, and which apparently contained no placer deposits. Mr. Stevens and his associates were in search of lode locations, silver-bearing lodes, and a metal which is not found in placer ground.

Von Cotta says (page 505), "Surface deposits from which silver is extracted are not known, nor do they probably exist."

Why was this done? The intentions of Wells and Moyer and Stevens are said to have been expressed at the time. If they were so expressed, did they state the truth? If not, what is the fact in relation to the matter—what was the intention of the parties in making this application and securing this patent?

If, upon the evidence, you say it was to acquire title to the lode or vein in controversy, the patent will not operate to convey such title. If, on the other hand, the application was made in good faith, with intent to acquire the premises as placer ground only, and without knowledge of the existence of any lode in the premises, the patent will operate to convey such title.

If the application had been limited to California and Eureka gulches, and some reasonable space adjacent thereto, which it might be supposed contained such valuable deposits as had been worked out in the gulches, no question could arise in respect to the matter; but when the outlying territory beyond these gulches which contains nothing in the nature of a placer deposit, and is apparently valuable only for the ores or minerals which may be found beneath the surface within the country-rock in the form of veins or lodes, is embraced in such an application, what shall be said of the purpose of putting in such outlying parts?

The conduct of the parties, quite independently of any intention by them expressed, may be the subject of reasonable presumption and inference; and if it appear to you that the purpose was to secure such lodes or veins as might be found on the mountain within the limits of the placer claim, such purpose can not be effected in any such way.

Any attempt to pervert the statute and take the lode in a manner not authorized by law can not be upheld.

DENVER, COLO., Jan. 27, 1887.

## THE COPPER ORES OF THE SOUTHWEST.*

By Arthur F. Wendt, New York City.

(*Continued from page 96.*)

The Queen Group of mines, almost opposite to the Metcalf Hill, belongs to the second class, and is opened on several veins, varying in width from 2 to 7 feet. The Queen claim is opened by a tunnel run 500 feet on the vein. The vein has well-defined walls, but the ore is very irregularly distributed and unreliable. The vein dips at 80 degrees, and can be traced a considerable distance.

The Coronado mines also belong to the second class. They are several miles west of the Longfellow and Metcalf mines, and are found in a huge dike of quartz-porphyry cutting through syenite and granite. The latter abuts against and is surrounded by stratified limestone. There are six claims, called the Boulder, Horseshoe, Coronado, Crown Leaf, Copper Crown, and Matilda, located on this dike. When first examined by the writer, in 1881, these mines formed, to all appearances, an inviting field for prospecting, and appeared to promise great future value. Their large development in late years has not, however, borne out the expectations then expressed by the writer. It is a well-known fact, alluded to in a former report on this mine by the writer, that, contrary to the notion held by the vast majority of the public, metallic mines grow poorer in depth in nine cases out of ten. The decomposed surface ores are the richest. The undecomposed base ores underlying the surface ores are both poorer and more difficult to mine and beneficiate. This has been the history of all the copper-pyrites mines in the Alleghanies. It has been the history in the Lake Superior region, where rich black oxides and accumulations of native copper are of frequent occurrence when opening the mines.† It has been the history in the well-known mines of Spain, now so impor-

* Abridged from a paper read at the Bethlehem Meeting of the American Institute of Mining Engineers, May, 1886.

† Mr. Wendt is under a misapprehension, both as to the occurrence of black oxides, in any quantity worthy of note, in the Lake Superior mines, and as to the impoverishment in depth of the Lake native copper mines, no such fact being observable in the deepest mines of the district.—ED. E. AND M. J.

tant by reason of their enormous production of copper from low-grade pyrites; and the same may be confidently predicted in every instance.

The Coronado mines, unfortunately for the owners, have presented an extreme case of rapid depreciation of ores in depth. At the surface, average samples taken from numerous places gave assays running from 6 to 45 per cent, and bodies of pure copper glance, cropping out at the surface at various points, seemed to indicate a large future value underground. As late as 1884, the writer drove a tunnel on the Boulder claim, which, for the whole of its hight and a distance of over 150 feet, was run on a vein of solid copper glance from one to two feet wide, and averaging over 40 per cent of metallic copper.

Fig. 7 shows the large amount of dead-work done on these mines, which has led to a very thorough knowledge of their conditions. The shafts shown are from 200 to 300 feet deep, and tunnels in proportion. The vein itself is from five to fifteen feet wide, and can be traced continuously along and through the quartz-porphyry dike. It is a fissure-vein parallel with and in the quartz-porphyry. Fig. 8 shows a cross-section of it. In places, the walls are very smooth and striated. Usually they are decomposed and kaolinized for some distance into the quartz-porphyry. Where not so decomposed, the vein is of inferior quality. Indeed, it can be laid down as law, both for this mine and for all others through the Southwest, that indications of an extensive decomposition of the country-rock are favorable to the finding of large ore-bodies. From the very nature of things, this must be expected; for this decomposition is an accessory to the deposition of the ores; and where there has been an extensive deposition of ore, there an extensive decomposition of the surrounding rocks must be expected.

The copper glance in the Coronado mines usually occurs massive. In the Horseshoe claim, where the vein is some fifteen feet wide, it occurs in minute particles scattered through the gangue, which is practically a matrix of kaolin with imbedded rounded particles of quartz, undoubtedly in its original form a quartz-porphyry. On the Horseshoe claim, a parallel vein has been cut and prospected to some extent. It is a counterpart of the main vein, but somewhat smaller. Wherever the copper glance in the Coronado mines has been followed down, it disappears at a depth of 150 or 200 feet from the surface, and either the vein becomes barren or the glance is replaced by yellow sulphurets, sparingly disseminated through the gangue. Experimental concentrations of these yellow sulphurets gave assays of 8 per cent. With the conditions governing the mining industry of the Southwest at the present time, such ore is valueless, although in the future, undoubtedly, these ores may be worked on an extended scale.

The following analysis of ores from the Coronado mines is representative also of all the other ores of the second or siliceous class:

| | I. | |
|---|---|---|
| Cu | 11·17 | 21·95 |
| $SiO_2$ | 67·00 | 48·90 |
| Fe | 6·91 | 9·41 |

The low percentage of iron and very high percentage of silica will be noted. These ores can not be smelted alone, but require the addition of both iron ore and limestone to flux them, or else they must be smelted with basic ores of the Longfellow or kindred mines. At the time of writing, the concentration of these siliceous low-grade ores has been taken actively in hand by the Detroit Copper Company, owning several of the Longfellow group of mines. A plant to treat one hundred tons a day is under construction; and the experiments made so far seem to indicate that no difficulty will be experienced in saving two thirds of the metal in low-grade ores, and enriching the ores to a smelting yield of say 12 per cent. The large loss of copper in the tailings is undoubtedly due to the fine dissemination of the particles of copper mineral and to the presence of a great deal of copper in an oxidized state. As depth is gained in the mines of the second class, yellow sulphurets only will undoubtedly be found. The concentration will then probably be both greater and more perfect. The Coronado mines are at present idle. Of all the mines in the porphyry, only a few adjoining the Longfellow group are now worked by the Detroit Company, and the open cuts on the Metcalf mines are operated by the Arizona Copper Company.

The mines of the third class, namely, those occurring in granite, are few in number, and embrace only a few claims situated north of Chase Creek and near the divide between Chase Creek basin and the San Francisco River. Their great altitude makes them almost inaccessible. The ore is a copper glance in a vein ten feet wide, with good walls where opened. The mineralization of the vein appears to have no uniformity, and after shipping some ore from an open cut that assayed high, work has been abandoned.

The cost of mining in the Clifton District has remained practically the same for a number of years. In the winter of 1879, when the writer first examined these mines, mining was done by Chinese, Mexicans, and Americans on the Longfellow mines. The daily output from the property was some forty tons, yielding in the furnaces 20 per cent of fine copper

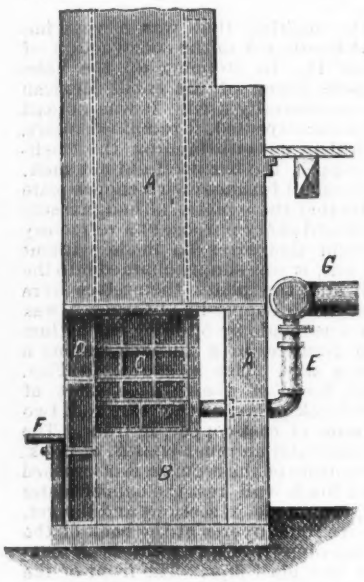



Fig. 9.—Copper-Lined Furnace: Side View.

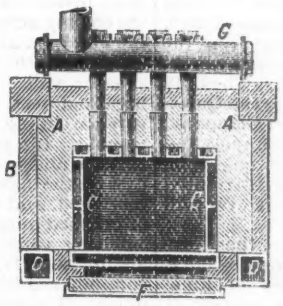



Fig. 11.—Copper-Lined Furnace: Plan.

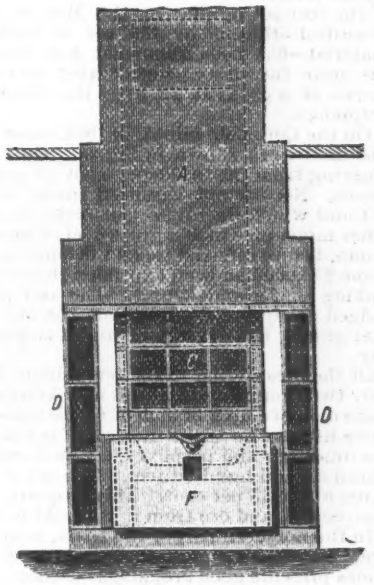



Fig. 10.—Copper-Lined Furnace: Front View.

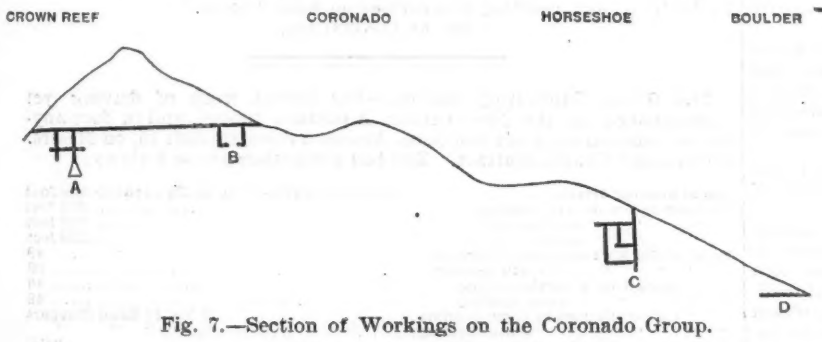



Fig. 7.—Section of Workings on the Coronado Group.

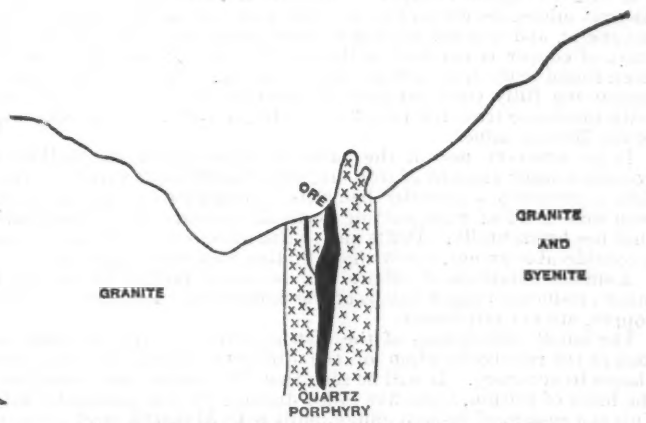



Fig. 8—Vertical Cross-Section of Coronado Vein.

The wages of Chinese miners were $40 a month and board; of Mexican miners, $50; and of American miners, $75. Materials were, of course, very high, as at that time every thing had to be transported by wagon from Las Vegas, New Mexico, a distance of some 600 miles. The number of employés was about 150, and the cost of mining, in round figures, $10 a ton.

The work was conducted at that time in a very crude manner. All the ore broken in the mine was carried out in wheelbarrows, and not a track was used in any part of the mine. Four different levels had been opened on the ore, and they were reached by inclines at various angles from the surface. Hoisting machinery had not been introduced. In recent times, the cost of mining, notwithstanding the large reduction in cost of materials by reason of the construction of the Southern Pacific Railroad and the branch road to the mines, and the reduction of wages to $2.85 a day for white miners and $2 for Mexicans, has remained as high as $8 a ton, because the large ore-chambers formerly found in the upper portions of the veins have been in a large measure exhausted, and a vastly greater amount of dead-work has become necessary to keep up the production.

The cost of mining at the Metcalf mines, in the manner already described—that, is by the use of sand-blasts and sorting the broken material—has been somewhat less than at the Longfellow, but will in the near future be considerably increased, if indeed these mines can be run at a profit at all after the exhaustion of surface ores from the croppings.

On the Coronado mines, in 1883, some $60,000 had been spent in doing the dead-work shown in Fig. 7. Only the rich, massive copper glance, assaying from 20 to 50 per cent in copper, had been shipped from the mines. No attempt has been made, so far, to put up dressing-works, without which the mines can certainly not be run at a profit. The only other mines on which a great deal of money has been spent are the Queen group, before referred to, and belonging to the Arizona Copper Company. Some $50,000 had been expended there up to 1883 in driving tunnels and sinking shafts and winzes. The vein can be considered a strong vein, judged solely as a fissure; but the ore in it is so irregularly distributed that mining has never paid, and it is quite doubtful whether it ever will pay.

Of the ores similar to the ferruginous basic Longfellow ores, there are only two promising localities now known in the Clifton District. One is some distance up a branch of Chase Creek, where a large body of limestone lies like an island in a sea of porphyry. On the western contact of the limestone and porphyry, a vein from four to fifteen feet wide can be traced several hundred feet. The ore is basic and of good quality, averaging above 15 per cent. This property was owned, at last accounts, by prospectors, and ore from it was sold to the Arizona Copper Company.

In the northern part of the basin, near the crest of the range of limestone mountains almost encircling the district, the Lone Pine group of mines presents good croppings of basic ore.

Many claims in the limestone country-rock are located on iron outcrops that carry no copper, or a very small percentage of no material value. One of the principal mines of this class is the Modoc, owned by the Arizona Copper Company. It is about two miles westerly from the Detroit mines, shown on Fig. 5. The iron ore at this mine is slightly magnetic, and caps the crest of a round limestone hill. Occasionally, a stain of copper is met with in the ore: but no body of copper ore has yet been found in the iron or in its neighborhood. The iron ore is very pure, containing fully sixty per cent of metallic iron, and is used, together with limestone from the Longfellow Hill, as a flux for the siliceous ores of the Metcalf mines.

In the northern part of the basin of Chase Creek, the Guthrie mines contain a large amount of iron ore, but of a different variety. The iron here approaches a specular hematite in composition, and is found in a vein some ten feet wide, cutting vertically through the bedded limestone that lies horizontally. Drifts and shafts have been sunk on this mine to a considerable extent, but without finding valuable copper ores.

A similar condition of affairs will be noted farther on to exist in the other producing copper camps of the Southwest. Iron ledges, barren of copper, are not infrequent.

The small sketch-map of the district (Fig. 1)* gives an approximate idea of the relative location of the different mines. The map bears no claims to accuracy It will be seen that the mines are connected with the town of Clifton, some five miles distant, by the Coronado Railroad. This is a system of 20-inch gauge, built with 25-pound steel rails, which carries the ores of the mines of the Arizona Copper Company to the smelting-works of that company at Clifton, and also serves to return to the mines all supplies, and the fuel used by the Detroit Copper-Works at the town of Morenci, built on the Longfellow Hill.

The elevation of the town of Morenci, and of all the mines of the different groups, to wit, the Longfellow, Queen, Metcalf, and Coronado, is from 1000 to 2000 feet above the level of Chase Creek Cañon. The mines are connected with the Coronado Railroad, located along the bottom of Chase Creek Cañon, by automatic inclined planes. At the Longfellow mine, the inclined plane serves the double purpose of permitting the descent of the Longfellow ore and of the copper bullion made at the Morenci works and of carrying up to these works the coke used as fuel. These works are connected with the narrow-gauge railroad by a branch from the head of the Longfellow incline. There are four locomotives in use on the Coronado Railroad and branches, the heaviest one weighing 13 tons. They draw iron side-dump cars weighing 5000 pounds, which carry about three tons of ore at a load. These cars are run bodily up the Longfellow incline, and at the head of it are again taken by a small locomotive and carried over to the smelting-works of the Detroit Company at Morenci. The short road from the incline to these works passes through two tunnels, one cutting completely through the limestone of the Longfellow Hill in an easterly and westerly direction, and the other tunnel, on the Humboldt claim, running in a northerly and southerly direction and entirely in porphyry.

In 1879, all the Longfellow ore was hauled to Clifton by a wagon-road, shown in Fig. 1. The cost was $10 for every ton of ore hauled, and not only this excessive cost, but the frequent stoppage of teams by Indian raids, led to the building of the Coronado Railroad. When first built, it was to be operated by mules, but, as anticipated, it was soon found to be more profitable to substitute a small engine. Since that date, the weight of the engines has been increased twice, and at present a thirteen-ton engine is not found any too large. This, by the way, I believe is the only railroad of so narrow a gauge delivering materials to a three-foot gauge, which in turn delivers them seventy miles away to a standard gauge of 4 feet 8½ inches.

The first smelting of copper ores in the Clifton District was in 1874, when Mr. H. Lesinsky erected at Clifton a small Mexican adobe furnace with a blast supplied by a common blacksmith's bellows. The ore was mined from the Longfellow mine and packed on burros down into Chase Creek Cañon, where the furnace was situated. This furnace smelted very little over one ton of ore a day. A campaign seldom lasted a week. The loss in slag was very great, and the consumption of fuel enormous, not over two and a half to three pounds of ore being smelted to the pound of charcoal. The charcoal used was made from the mesquite found on the surrounding hills. Nowithstanding this crude beginning, the high prices of copper in those years made the enterprise a success, even in its infancy; and the mines have been steadily worked ever since.

In 1877, an invention was made in the smelting that was a vast improvement on the adobe furnaces, and finally led to the construction of the furnace shown in Figs. 9, 10, and 11. In stopping up the holes burned by the corroding slag in the adobe lining of the small Mexican furnaces, a piece of copper was once accidentally used. It was noticed that, instead of this copper melting, as was expected, it remained intact, the cooling action of the air being such that, notwithstanding the smelting going on at the face of the bar of copper, the bar itself did not melt. This led to the building of one of these small furnaces with copper-plate sides or walls; with the striking results that these plates, although reaching a red heat, failed to melt, and answered every purpose of a refrac ory furnace lining. Long campaigns could thereafter be made without trouble. If a plate of copper did melt out, it was simply charged into the furnace and run out as copper bullion, and the plates themselves were cast on the spot, Gradually the size of these copper-lined furnaces was increased, and a further improvement was made by building the bottom of crushed quartz, until the invention resulted in a furnace having a smelting capacity of 30 tons of ore a day. This is shown in Figs. 9, 10, and 11, in which *A* is the body of the furnace, built of common red brick, and resting on two brick pillars at the rear, and two pillars *D*, made of three short columns of cast-copper, in front. The crucible of the furnace is built on an outer and an inner wall *B*, of brick, between which clay is stamped. The bottom of the crucible is of crushed quartz stamped in place. On the inner brick wall rest the copper plates *C*, which, as shown in the drawing, are made in sections and flanges, resting one upon the other. There are four tuyeres at the back of the furnace, supplied by blast from the blast-pipe *G*. Canvas boots *E* connect the tuyeres with the nozzles of the blast-pipe. The front of the crucible is closed by an iron or copper plate *F*, with a slag-lip and tapping-hole cut in it. The copper plates *C*, if found to sag from the melting away of the lowest plate, were supported from the outside by bars of iron; and the bottom-plate, covering the front of the furnace directly over the cinder-notch, was cast in the shape of a box, as shown in Fig. 11, and kept full of water. If there was a tendency of one side of the furnace to run too hot, a spray of water was thrown against that side, and it was rapidly cooled and brought to a normal condition. In running the furnace, the fuel was charged against the back wall and the ore to the front, and smelting was carried on with "noses."

(TO BE CONTINUED.)

* ENGINEERING AND MINING JOURNAL, February 5th, 1887, page 95.

**The Great Tunneling Record.**—The fastest work of driving yet accomplished on the New Croton Aqueduct tunnel, and in fact anywhere, referred to in our last issue, has been done at shaft 15, on Messrs. O'Brien and Clark's contract. The full particulars are as follows:

| | |
|---|---|
| Size of heading driven | 8 feet by 16 feet; 3⅛ to 3¾ yards to the foot |
| Distance driven in both headings | 614 feet |
| " " " north heading | 288 feet |
| " " " south " | 326 feet |
| No. of shifts worked in north heading | 49 |
| " " " " south heading | 50 |
| " " shots fired in north heading | 46 |
| " " " " south heading | 49 |
| " " rock-drills used in north heading | 2 No. 13 Rand Sluggers |
| " " " " south heading | 3 " " " " |
| " " days worked in north heading | 24½ |
| " " " " south heading | 25 |
| " " feet driven per day in north heading | 11·7 |
| " " " " " " south heading | 13·0 |
| " " muckers employed in each shift | 8 |

The largest weekly run was made at the south heading from the 22d to the 29th of January, 12 shifts (no Sunday work), when 90 feet were driven in this time. The rock is a hard gneiss. For a distance of 15 feet, a seam of quartz was struck, which dulled the steels rapidly and caused considerable delay. The explosive used was mostly the rackarock powder, made by the Rendrock Powder Company, save a few shots, where dynamite was put in the center cut only. This work stands as the best on record. The greatest progress made in the South Pennsylvania tunnels was 84 feet a week. At the Sutro Tunnel, where some fast work was done, the highest record was 10·3 feet a day, against a monthly average of 13 feet a day here. This shaft is under the immediate supervision of Mr. William M. Hall, engineer for Messrs. O'Brien & Clark. The foreman is Mr. John Barron. The heading bosses under him were John Stevens and J. Shephard at the north and Patrick Haley and William Johns at the south heading. It is worthy of particular note that the Slugger drills that made this great record have been in use for nearly two years, thus showing a wonderful durability. Another big month's work was done at shaft 19, north, under Messrs. Paige, Carey & Co., where 309 feet of heading were finished during the month of January, 30 working days, 13 shifts a week. The section here runs about 5½ cubic yards to the foot. The foreman is Mr. William Hollister, and his heading bosses are William Aldron and M. Burran. The drilling was done with four No. 13 Slugger Rand drills.

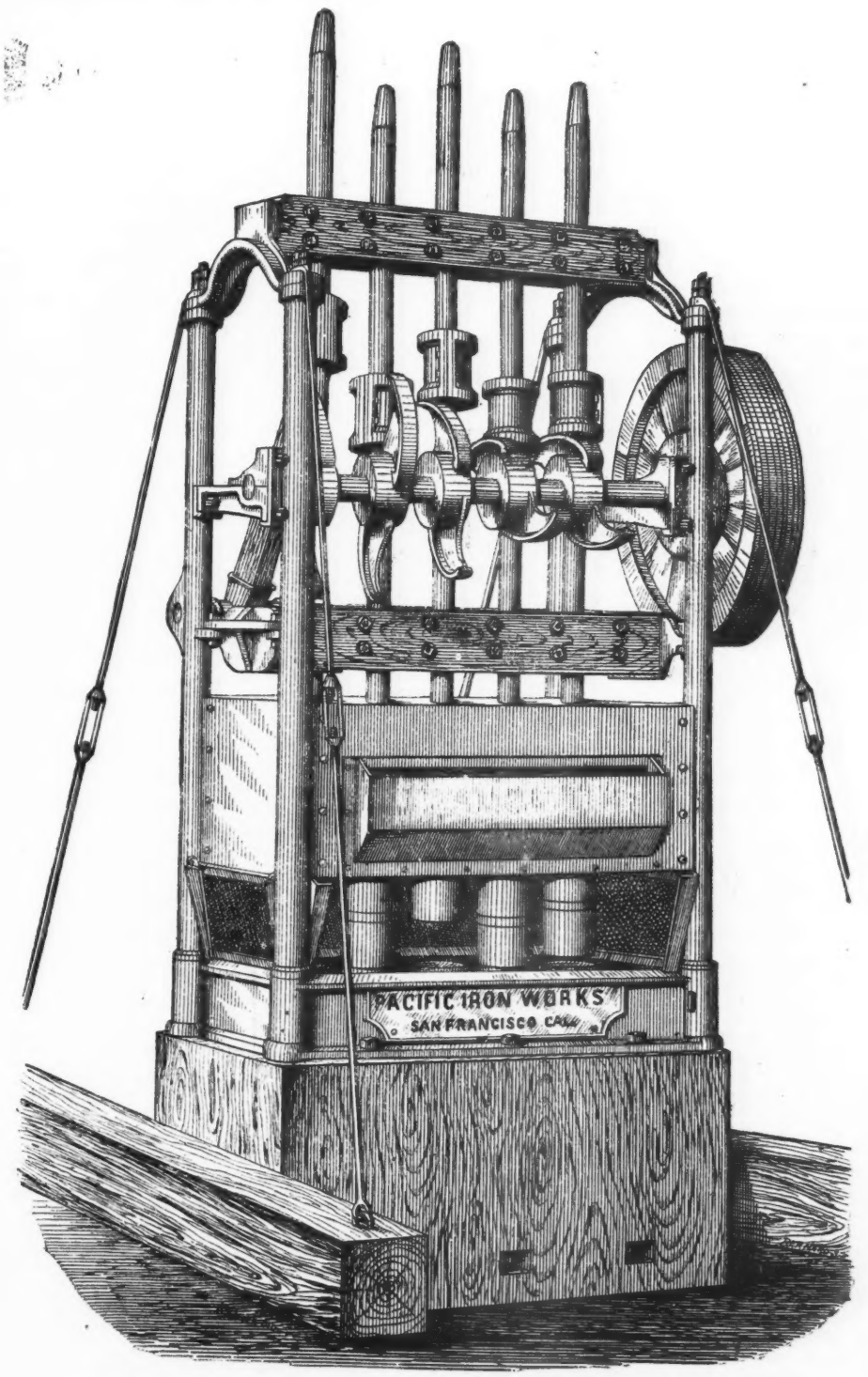
## THE RELIANCE IRON FRAME PORTABLE STAMP BATTERY.

The old stamp battery still continues to enjoy popularity on account of its simplicity and the certainty of its operation, and from the fact that, if any thing goes wrong with one head, it does not stop the entire mill. The accompanying illustration shows a very convenient form of battery, the iron frame being easily transported, and easily and quickly erected—conditions of great importance in many mining districts. This battery, manufactured by the Pacific Iron-Works of San Francisco, embodies the improvements suggested by many years of experience in making mining machinery, and it has already made its way into general use, more than 100 batteries having been erected with the iron frames. Many of these have gone to Mexico, South America, and other foreign countries. The battery is made with a discharge at each end as well as each side, thus considerably

## PRODUCTION OF BESSEMER STEEL INGOTS AND RAILS IN 1885 AND 1886.

The following brief table of statistics of this great industry, collected by the American Iron and Steel Association, forms the most eloquent evidence of the progress made in this country in steel making. It shows that in 1886 our production exceeded by no less than 49 per cent the great make of 1885:

| | Ingots. | | Rails. | |
|---|---|---|---|---|
| | 1886. | 1885. | 1886 | 1885. |
| Pennsylvania | 1,507,577 | 1,109,039 | 1,097.943 | 736,522 |
| Illinois | 535,602 | 366,659 | 430 975 | 308,242 |
| Other States | 498,314 | 226.064 | 220,981 | 29,843 |
| Total net tons | 2,541,493 | 1,701,762 | 1,749,899 | 1,074,607 |
| Clapp-Griffiths only | 46,371 | 21,647 | ..... | ..... |




THE RELIANCE IRON FRAME PORTABLE STAMP BATTERY.

increasing its capacity, and it is made of all sizes from 800-pound stamps down, according to the use required. The mortar may be made in sections for transportation on mules where this is necessary.

The quality of the work is, of course, the very best, as is all that is turned out by the Pacific Iron-Works. It is, in fact, a mill that creditably and satisfactorily represents advanced American practice, and which has contributed to the reputation that American mill machinery deservedly holds as "the best in the world."

Mr. Swank, the accomplished statistician of the Association, says, "Nine States and 31 works made Bessemer steel in 1886, of which works six were Clapp-Griffiths. The whole number of converters employed was 65.

"Pennsylvania made 59 per cent of all the ingots produced in 1886, against 65 per cent in 1885; Illinois made 21 per cent in 1886, against 22 per cent in 1885; other States made 20 per cent in 1886, against 13 per cent in 1885.

"The extraordinary production of Bessemer steel in 1886 was chiefly

the result of great activity by the large plants of the country which had been established prior to that year. Only a small part of it, about 100,000 tons, was due to the starting up of new plants.

"Our production of Bessemer steel rails in 1886 was as remarkable as our production of Bessemer steel. Its magnitude is best comprehended by a reference to the statistics for some previous years. In 1882, this country produced 1,438,155 net tons of Bessemer steel rails, which was the highest annual product down to that year. From 1882 to 1885, the production steadily declined to 1,074,607 net tons in the latter year. In 1886, it suddenly rose to 1,749,899 net tons, an increase of 675,292 tons, or 63 per cent. The production of 1885 was 959,471 gross tons, and in 1886 it was 1,562,410 gross tons. In this statement for 1886, we do not include a few thousand tons of Bessemer steel rails rolled in iron rolling-mills from imported blooms.

"Pennsylvania made 63 per cent of all the Bessemer steel rails produced in 1886, against 68 per cent in 1885; Illinois made 25 per cent in 1886, against 29 per cent in 1885; and other States made 12 per cent in 1886, against 3 per cent in 1885.

"Sixty-nine per cent of our total production of Bessemer steel ingots in 1886 was converted into rails, against 63 per cent similarly converted in 1885.

"It is just twenty years since Bessemer steel was first made in this country as a commercial product. In 1867, we made 2277 gross tons of Bessemer steel rails. In recent years, we have frequently made more Bessemer steel ingots and more Bessemer steel rails than Great Britain; but as our production of open-hearth steel was always much less than that of the mother country, we could never until now say that our aggregate production of steel exceeded hers in any year. In 1886, however, we not only made more Bessemer steel ingots and Bessemer steel rails than Great Britain, but our aggregate production of steel, open-hearth and crucible included, was very much larger. In a year or two, we shall also make more pig-iron than our great rival."

## THE FOREIGN QUICKSILVER TRADE.

The quantity of quicksilver imported and exported from England during the year 1885 was respectively 55,154 and 48,865 flasks, leaving on hand a stock estimated at 68,590 flasks, with the price about £6 5s.

The movement in 1886 was: Imports, 58,968, an increase of 3814 flasks; exports, 66,109, an increase of 17,244 flasks, the stock on hand at the end of the year being estimated at 50,000 flasks by Messrs. J. Bennett & Brothers, of London.

Rothschild's lowest price was £5 15s., in March; highest, £7 10s., in October, closing the year at £7 5s.

IMPORTS INTO AND EXPORTS OF QUICKSILVER FROM ENGLAND, 1886.

| | Flasks. | | Flasks. |
|---|---|---|---|
| Total imports | 58,968 | To West Indies | 69 |
| Total exports (as below) | 66,109 | Central America | 188 |
| To Russia | 1,031 | Colombia, Argentine Republic, and Uruguay | 207 |
| Norway, Denmark, and Sweden | 49 | Peru | 3,188 |
| Germany | 3,557 | Chili | 2,297 |
| Holland | 853 | Brazil | 173 |
| Belgium | 816 | Hong Kong | 21,515 |
| Channel Islands | 118 | Japan | 810 |
| France | 4,553 | Singapore | 10 |
| Spain and Portugal | 445 | Bombay and Madras | 905 |
| Italy | 11 | Bengal | 1,488 |
| Turkey and Bulgaria | 97 | Victoria and New South Wales | 214 |
| Gold Coast and Egypt | 65 | Queensland | 297 |
| Natal and Cape of Good Hope | 195 | New Zealand | 34 |
| Canada and Newfoundland | 21 | | |
| United States of North America | 12,311 | | |
| Mexico | 10,592 | Total | 66,109 |

In the details of shipments given above, it is to be remarked that the largest shipments were to Hong Kong, 21,515 flasks, 7461 flasks in excess of the previous year. Mexico took 10,592 flasks, against 5680; and the United States, despite the tariff (which is too small), took 12,311 flasks (a portion of this in bond for Mexico), against 5112 in 1885. J. B. R.

SAN FRANCISCO, Jan. 27.

**A Volcano in the Baku Oil Field, Russia.**—A dispatch, dated St. Petersburg, February 7th, says, The inhabitants of Baku, the center of the great Russian petroleum fields, have been much alarmed over a subterranean explosion that shook houses and caused considerable damage. At the same time, a volcano burst on Lokbatan, ten miles distant from Baku. For two nights, the volcano threw a column of fire and mud 350 feet high, illuminating the country for miles around. The mud emitted during the eruption already lies from seven to fourteen feet deep over a full square mile of territory.

**Iron Classification for Duty.**—The Treasury Department has reversed its recent decision, to which we have several times referred in these pages, as to the mode of assessing duty on iron ore. The duty being assessed on the number of tons imported, it was recently claimed and decided by the department that the importers had the right to dry the iron ore and exclude the moisture before duties were assessed. The producers of domestic iron ore protested that the duties should be assessed upon the ore in the damp condition in which imported, and the department on the 4th inst. revoked its former order and directed the assessment of duty upon the ore in the moist state.

**Rapid Work on the Croton Aqueduct—The First Section Finished.**—The heading excavation on Section A of the New Croton Aqueduct was completed on February 3d, being the first completed rock section on the aqueduct. Section A begins at shaft 24, being the first shaft north of the Harlem River, and extends to a point 3700 feet north of shaft 22. Shaft sinking on this section was begun January 15th, 1885. The headings were turned on shaft 23 on April 29th, 1885; on shaft 22, April 30th, 1885. The headings between shafts 22 and 23 met in June, 1886, being the first headings to meet on the line. During the last ten months, the average progress in headings on this section has been 218 feet a month. Greatest progress in one month, June, 1886, 275 feet (shaft 23). This section is in Heman Clark's contract, sub-let to Rodgers & Farrell, and under the immediate supervision and direction of Mr. E. J. Farrell, whose work there has placed him in the front rank as a driver of tunnels. Besides the rock excavation, there have been completed in this section 6700 feet of masonry. According to the terms of the contract, this section was to be completed eight months hence, and at the present rate, it will be finished in from four to five months. When the rock work was first begun on this section, the Rand drills were used exclusively. In August, 1885, Ingersoll drills were put in on one half the section, and during the past year Ingersoll drills have been used exclusively on the entire section.

## BOOKS RECEIVED.

DEPARTMENT OF THE INTERIOR, UNITED STATES GEOLOGICAL SURVEY. J. W. POWELL, DIRECTOR. *Mineral Resources of the United States.* Calendar Year 1885. Division of Mining Statistics and Technology. Washington: Government Printing-Office. 1886. 8vo, pages vii+576 (including Index).

*Geological History of Lake Lahontan, a Quaternary Lake of Northwestern Nevada.* By Israel Cook Russell. Washington: Government Printing-Office. 1885. Quarto, pages xiv + 288 (including Index), 46 plates (one a pocket map of Lake Lahontan), and 36 figures. $1.75.

Besides the introductory matter, the book gives the genesis of Lake Lahontan; the physiography of its basin; the physical, the chemical, and the life history of the lake; a *résumé* of the history of the lake; a chapter on quaternary climate, one on the geological age of Lake Lahontan, and one on the post-Lahontan orographic movement. There are also tables of chemical analyses of American river waters, of American spring waters, of the waters of inclosed lakes, and composition of the principal lakes and rivers of the Lahontan basin.

*Railway Problems: an Inquiry into the Economic Conditions of Railway Working in Different Countries.* By J. S. Jeans, Fellow and Member of Council of the Statistical Society, Author of "England's Supremacy," etc. London: Longmans, Green & Co. 1887. 8vo, pages viii+560 (including Index). (*Price unknown.*)

Introduction and Outline. Chap. I. Historical and retrospective. II. Railway capital. III. Cost of railway construction. IV. Railways as investments. V. Legal status of railways in Great Britain. VI. Legal status of foreign railways. VII. Gross and net earnings. VIII. Working expenses. IX. Locomotive power. X. Economy of fuel. XI. Expenditure on permanent way. XII. The taxation of railways. XIII. The distribution and cost of railway labor. XIV. Rolling stock. XV. Traffic charges. XVI. Extent and character of railway passenger traffic. XVII. Financial aspect of passenger traffic. XVIII. Economical working of passenger traffic. XIX. Goods traffic. XX. Railway transportation charges. XXI. American railways. XXII. Colonial railways. XXIII. English railway administration. XXIV. Scotch railway administration. XXV. Special features of Irish railways. XXVI. Railways compared with canals. XXVII. Extent and conditions of internal commerce. XXVIII. Early estimates compared with actual results. XXIX. Accidents on railways. XXX. Railways as state property. XXXI. The cost and the conditions of working railway traffic in different countries. XXXII. Pending problems. Appendix. Chronology of railway events and legislation in the United Kingdom. Tabular Appendix. Index.

*The Principles and Practice of Canal and River Engineering.* By David Stevenson, F.R.S.E., Member of the Institution of Civil Engineers; Author of "A Sketch of the Civil Engineering of North America," etc. Revised by his sons, David Alan Stevenson, B.Sc., F.R.S.E., etc., and Charles Alexander Stevenson, B.Sc., F.R.S.E., etc. Third edition. Edinburgh: Adam & Charles Black. New York: Scribner & Welford, 743-745 Broadway. 1886. 8vo, pages xiv + [1] + 406 (including index), 19 plates, and 71 wood-cuts. (No price given.)

Chap. I. Barge canals. II. Ship canals. III. The compartments of rivers defined. IV. Hydrometric observations. V. Discharge of Rivers—undercurrents—specific gravities of water, etc. VI. The "river proper" compartment. VII. Tidal propagation and tidal currents of rivers. VIII. Tidal compartment—works for its improvement. IX. Application of these works in practice. X. Situations where the principles of improvement recommended are not applicable. XI. Works for accommodation of vessels. XII. "Sea-proper" compartment of rivers. XIII. Reclamation and protection of land. XIV. Crossing of navigation by bridges. Physical characteristics of rivers. Index.

## PATENTS GRANTED BY THE UNITED STATES PATENT-OFFICE.

GRANTED FEBRUARY 1ST, 1887.

356,742. Crane for Excavating-Machines. Lennox Birckhead, Toledo, Ohio.
356,776. Incrustation Preventive. Samuel W. Merryman, Baltimore, Md.
356,785. Packing for Piston and Valve-Rods. Thomas B. Purves, Greenbush, New York.
356,812. Manufacture of Draw-Bars. John T. Wilson, Pittsburg, Pa., Assignor of one half to the Pittsburg Forge and Iron Company, same place.
356,813. Manufacture of Draw-Bars. John T. Wilson, Pittsburg, Pa., Assignor of one half to the Pittsburg Forge and Iron Company, same place.
356,814. Manufacture of Draw-Bars. John T. Wilson, Pittsburg, Pa., Assignor of one half to the Pittsburg Forge and Iron Company, same place.
356,863. Apparatus for the Manufacture of Gas. Augustus L. Allen, Poughkeepsie, New York.
356,876. Crushing-Machine. Lester W. Hewes, Chicago, Ill., Assignor to the Excelsior Iron-Works, same place.
356,904. Locking Railroad-Rails to their Fish-Plates at the Rail-Joints. James Tittle, Johnstown, Pa., Assignor of one fourth to John S. Tittle, same place.
356,923. Gas-Furnace for Heating Blanks. Elial F. Carpenter, Jamestown, New York, Assignor of two thirds to Frederick T. Powell and Charles J. Carpenter, both of same place.
356,946. Plunger for Oil-Well Pumps. Edward P. Landas, Titusville, Pa., Assignor to Clarence L. Landas, same place.
356,974. Manufacture of Steel Forgings. Ralph Bagaley, Pittsburg, Pa.
356,982. Process of Welding Wrought-Iron to Cast-Iron. William W. Burson, Chicago, Ill.
357,030. Gas-Furnace. Francis Radcliffe, Plumstead, County of Kent, Assignor to Henry Arthur Gadsden, London, England.
357,103. Process of Purifying Gas-Carbon. Frederick H. Snyder, Jersey City, New Jersey, Assignor of one third to George W. Richardson and Martin Luscomb, both of Boston, Mass.
357,104. Compound for Roofing and Protecting Metals. Frederick H. Snyder, Jersey City, New Jersey, Assignor of one third to George W. Richardson and Martin Luscomb, both of Boston, Mass.
357,105. Refractory and Non-Conducting Material from Gas-Carbon for Crucibles, Furnace-Linings, Glass-Pots, Bessemer Converters, Artificial Stone, Polishing-Wheels, etc. Frederick H. Snyder, Jersey City, New Jersey, Assignor of one third to George W. Richardson and Martin Luscomb, both of Boston, Mass.
357,107. Obtaining Sulphuric Acid by the Aid of Waste Steam. Hermann J. P. Sprengel, Pimlico, County of Middlesex, England.
357,129. Chemist's, Assayer's, and Prospector's Balance. Melville Attwood, Saucelito, and Henry R. Taylor, Oakland, Cal.; said Attwood Assignor to said Taylor.
357,149. Plunger for Deep-Well Pumps. John D. Howard, Zincite, Mo., Assignor of one half to J. W. Freeman, same place.
357,152. Clod Crusher and Pulverizer. David Lubin, Sacramento, Cal., Assignor of two thirds to Harris Weinstock and Albert Bonnheim, both of same place.
357,160. Machine for Bending Angle and other Bars. Wenzel Toepfer, Milwaukee, Wis., Assignor to Wenzel Toepfer & Sons, same place.

## PERSONALS.

Capt. B. W. Doyle, formerly with the New York, West Shore & Buffalo Railroad, has been elected Secretary of the Pennsylvania Lead Company, of Pittsburg, and will have charge of its transportation matters.

## FURNACE, MILL, AND FACTORY.

Stock has been subscribed for a chemical, charcoal, and iron furnace plant, capital stock $350,000, to be built at Florence, Ala. The land has been given.

Arrangements are making at Anniston, Fla., to build pipe-works there. The company will have a capital stock of $200,000.

The Ashland foundry and machine-shops, Ashland, Ky., will be enlarged by April. Stoves of every description will be made in the foundry, and heavy castings for machinery.

The spring and axle department of Singer, Nimick & Co.'s mill, Pittsburg, Pa., which was recently destroyed by fire, has been rebuilt and considerably enlarged, and has begun operations.

The Western Nail Association, at a meeting at Cincinnati, Ohio, on the 9th inst., voted unanimously that the price of nails be advanced to $2.70 card, an advance of 10 cents.

Tests of the ore of the Bear Mountain Mining Company, Bear, Ark., are making by Messrs. Meech & Co., of Cleveland, Ohio. If these tests are satisfactory as regards the adaptability of the machinery, the company will probably put in one of these plants.

The Milwaukee Furnace Company, to which we referred in our issue of January 29th, will operate the Minerva Furnace, for some time idle, at Milwaukee, Wis. The furnace will be blown in just as soon as repairs are completed, and will have a capacity of about 35,000 tons of pig-iron annually.

The Fall River Iron-Works, Fall River, Mass., which is one of the oldest plants in this country, having been built in 1842, have shut down permanently. They consist of nine double and five single puddling-furnaces, 11 heating-furnaces, two hammers, nine trains of rolls, and 105 nail-machines. The product is nails, hoops, bands, and bar iron, and the capacity 11,000 tons a year. It was found impossible to compete with Western works that are situated near the base of natural gas and iron supplies.

The Lehigh Car Manufacturing Company's Works, including the machinery, at Stenton, Pa., which failed several months ago, have been sold by the sheriff to the Allentown National Bank for $2000, subject to mortgages. The works are said to be worth $150,000. Several banks in the Lehigh Valley, in Philadelphia, and in New York are interested in the sale. The Fisher Pipe Foundry, in Allentown, and the Lehman Brass-Works, in South Bethlehem, were concerned in the failure, and have since changed hands.

The Standard Oil Company intends, it is reported, to build a large iron mill near Oil City, Pa., for the manufacture of hoop-iron and wrought-iron pipes. The company consumes about 250 tons of hoops daily for the 50,000 barrels of oil imported, and is also one of the leading consumers of wrought-iron pipes. The mill would need about 150 puddling-furnaces to make the necessary product. The greater part of its hoops are now made at Youngstown. Experiments have been made with the use of steel for hoops, but they have, it is said, proved a failure.

Judge Treat granted an order in the United States Circuit Court at St. Louis, Mo., on the 7th inst., authorizing a settlement of the St. Louis Ore and Steel Company's liabilities pursuant to the recent arrangements between the creditors, stockholders, and bondholders, and releasing the property. Under this order, the company resumes possession of the property at once, and sale is avoided. The company will operate the Pilot Knob iron mines and the Carbondale coal mines with a double force night and day, as they were operated by the receiver, and will take possession of the Vulcan Iron-Works again upon the expiration of the present lease.

## CONTRACTING NOTES.

CONTRACTS OPEN will be found on page xix. New Contracts this week: No. 206, Wrought-Iron Pipe; No. 207, Steel Gun Forgings; No. 208, Dredging; No. 209, Electric Lighting Plant; No. 210, Water-Works.

J. A. Quigley & Co., of St. Louis, Mo., have received a franchise for water-works for Holden, Mo.

The Union Iron-Works Company, Selma, Ala., wishes figures for a complete merchant rolling-mill, to work up wrought scrap.

The Water Committee of Montreal, Canada, is considering the erection of a new pumping-engine and extensions of mains. Further particulars can be learned by addressing T. C. Keefer.

The Fulcher & Dyas Brick Company, Nashville, Tenn., is about to put in new machinery that will double the present production.

The special water-works committee of Elgin, Ill., recommends the awarding of the contract to the Holly Company, of Lockport, New York, for $169,400, exclusive of the stand-pipe.

Reports from Selma, Ala., state that one of the greatest needs of that place is a good, responsible, and reliable boiler-shop, where repairs and new work can be done with promptness and at reasonable figures.

The contract for water-works, Socorro, New Mexico, has been given to Mr. George F. Woolston, of Boston, Mass., for $30,000. They are on the gravity system, and supplied from a spring at the base of the Socorro Mountains, to be completed by May 1st, 1887.

The contract for the dynamite gun vessel has been awarded to the Dynamite Gun Company by the Navy Department. The amount available for it is $350,000. Cramp & Sons, of Philadelphia, Pa., will construct the vessel.

The Farmville Water Company, Farmville, Va., has just been chartered, and intends to bring water five miles from a group of four springs, having a capacity of 175,000 gallons every twenty-four hours.

The construction of water-works at Emporium, Kan., has been awarded to the Holly Manufacturing Company, of Lockport, New York. It proposed to put in the works, excepting dam and engine-houses, at $142,671, and to do all the work at $162,000. This latter proposition has been accepted.

The Boston Water Board, Boston, Mass., contemplates making a public test of such water-meters as may be offered therefore, begining in April. Manufacturers who desire to avail themselves of this opportunity should address H. T. Rockwell, Chairman, until March 1st.

Messrs. McKinney Brothers, of Alleghany, Pa., manufacturers of hinges and butts, are about to begin the erection of a large factory at Alleghany, Pa. The entire machinery in the Rebecca street plant belonging to the McKinney Manufacturing Company will be removed to the new works. In addition to this, a large quantity of new machinery will be bought.

The Trenton Iron Company, Trenton, New Jersey, has received a contract from the Cobb Lime Company, Rockland, Me., for a tramway to Doherty's quarry for the transportation of rock from the quarry floor to the top of a bank 100 feet high. The tramway will consist of two steel cables 1200 feet long each, on which will run a carriage, to which is attached a tub which can be lowered into the quarry. The carriage and tub are operated by a hoisting-engine.

The contracts for dredging and excavating rock from the channel of the James River, near Richmond, Va., for the construction of mattress dikes, and for the construction and extension of jetties, have been awarded as follows: George F. Gayner, Savannah, Ga., for construction of dikes, jetties, and extension of jetties, $48,580; George E. Ward, Georgetown, D. C., for dredging sand and gravel, $15,500; and J. L. Johnson, Fulton, New York, for excavating solid and disintegrated rock, $47,500.

The trustees of the Water-Works, Oberlin, Ohio, have received the following proposals: (1) Two pumping-engines of 1,000,000 gallons capacity each: Knowles Steam-Pump Works, New York City, $6210; Gordon & Maxwell, Hamilton, Ohio, $6379; Deane Steam-Pump Company, Holyoke, Mass., $6815; Holly Manufacturing Company, Lockport, N. Y., $7400; George F. Blake Manufacturing Company, New York City, $7890; Henry R. Worthington, New York City, $8200. (2) Hydrants and valves, and water-gates (70 hydrants, 6-inch gates): Coffin Valve Company, hydrants, $26 each, gates, $13.50; Ludlow Valve Manufacturing Company, $26.20, $14.76; Galvin Brass and Iron Works, $26.50, $13.50; United States Pump and Valve Company, $26.60, $13.50; William Bingham & Co., $26.83, $12.75; James Flower & Brothers, $27, $12; Eddy Valve Company, $28, $13.90; Bourbon Copper and Brass-Works, $29, no bid; Holly Manufacturing Company, $30, $13.70; Chapman Valve Company, $30.85, $14.15; W. F. Otis (Matthews hydrant), $31,48, $10.78; R. D. Wood & Company, $31.50, $15.50; Rouse & Hills Company, no bid, $10.80; Lord, Bowler & Co., no bid, $16.50. (3) Cast-iron water pipe: Buffalo Cast-Iron Pipe Company, $32,50 a ton; Lake Shore Foundry, $33.45; Jackson & Woodin Manufacturing Company, $39.75 (per ton of 2240 pounds); Cincinnati & Newport Iron and Pipe Co., $40; Dennis Long & Co., $40.75; Shickle, Harrison & Howard, $42.

## LABOR AND WAGES.

For the first time in ten years, the miners employed by the Susquehanna Coal Company at Nanticoke, Pa., have been compelled to remain idle for more than half the time during the past month. The company's reason for not working full-time is the scarcity of cars, caused by the strike at tide-water, where the cars can not be unloaded. Some of the miners are in favor of a strike, but the majority of the miners and laborers who are working on half-time in the Wyoming coal regions are not in favor of a strike.

The Scale Committee of the Interstate Convention of Miners and Operators, which met at Columbus, Ohio, this week, has agreed upon the basis for whatever advance may be decided upon. The Ohio and Illinois basis remains unchanged. Pennsylvania was reduced from 71 to 70 cents a ton. This was after a long consultation. The operators wanted it made 68 cents, and the miners held out against a reduction. The 70 cents was adopted as a compromise. The Indiana differences were only arranged by a meeting of the operators and miners of the State. The basis is to be 80 cents for all coal 3 feet 1 inch thick and over; 85 cents for all under down to 2 feet 10 inches; and $1 for between 2 feet 7 and 2 feet 10 inches. At the session on the 10th inst., the Scale Committee reported, and the Pennsylvania operators claimed their representative on the committee had exceeded his authority in agreeing to 70 cents, or a difference of 10 cents between that and the Hocking Valley. The matter was referred to the convention, and after several hours the Pennsylvania operators withdrew, and agreed on a difference of 9 cents between that State and the Hocking Valley. Dispatches on the 11th inst. state that the miners and operators to-day agreed on an advance of five cents till November 1st, and five cents additional after that date to May 1st of next year.

The Executive Board of the Miners' National Assembly, Knights of Labor, which has been investigating the recent demand made by the Monongahela River miners, Pa., for an advance in the price of mining from 2½ to 3 cents a bushel, arrived at a decision on the 7th inst. After a thorough and careful examination of the books of four of the largest coal companies in the district, the Board decides that the rate for the fourth pool should be 2⅜ cents a bushel, and in the other three pools 2¾ cents. This is an advance of ⅛ cent a bushel in the fourth pool and ¼ cent in the first, second, and third pools. On the 10th inst., the miners resumed work in the first, second, and third pools. The pits are not all running yet, but they are expected to be in complete operation within a couple of days, by which time most of the miners will be ready to resume work. The hitch in regard to the mining rate in the fourth pool promises to be amicably settled. The miners have evinced a disposition to help their employers to fill their contracts. The men at one of the works have told their employer to take contracts and they will mine the coal at one eighth of a cent less than the decision of the National Board. This will put the rate at 2¼ cents, thus maintaining the difference of one half of a cent between the fourth and the other pools. The other operators think that their miners will make a similar proposition, and the indications are, that there will be no strike in the fourth pool.

## GENERAL MINING NEWS.

### ARIZONA.

COCHISE COUNTY—TOMBSTONE DISTRICT.

VIZINA CONSOLIDATED.—When this company applied to the Supreme Court in New York City to be dissolved in September last, William A. Pullman, President of the Seaboard Bank, was appointed its receiver. A report filed in the County Clerk's office on the 7th inst. by Herbert F. Andrews, referee, to pass Mr. Pullman's accounts, shows that the receiver has received $10,049, and has not had to pay out any part of that

sum, and that the stockholders of the company are entitled to a dividend of 5 cents on each share owned by them.

## CALIFORNIA.

### AMADOR COUNTY.

PLYMOUTH ALPINE MINING COMPANY, LIMITED.—This company has been organized, with a capital stock of £65,000, shares £1 each, to work the Alpine, which adjoins the Plymouth Consolidated Gold Mining Company. The Alpine Company was formed in 1872 to work the property, but soon afterward differences of opinion arose between the stockholders, and work was suspended. The property was afterward bought by the Bank of California, and has been held by that institution for about thirteen years unworked. Two shafts were sunk by the former Alpine Company, the first 650 feet deep, dipping south on the vein, with drifts at every 100 feet. Some of these were explored to a distance of about 125 feet both north and south, all in ore of good quality. At 650 feet, the ledge is reported to be 12 feet wide, and of improving value, but work was suspended before this level was fully opened. The second shaft was sunk about 300 feet. These operations were sufficient to show the existence of an extensive deposit of gold quartz, and it is claimed that this is as good as the adjoining property, the Plymouth Consolidated. The vender and promoter, Alfred E. Ann, will receive a payment in cash of £15,000, and £20,000 in fully-paid shares of the company. The property has been reported upon by Prof. Thomas Price.

### NEVADA COUNTY.

MILTON MINE AND WATER COMPANY.—Master in Chancery Houghton has filed a report in the Circuit Court, San Francisco, in the contempt case of the Milton Mine and Water Company, in Nevada City. This is one of the results of the anti-hydraulic mining decision rendered by Judge Sawyer in the celebrated *débris* case of Edwards Woodruff against the North Bloomfield Gravel Mining Company and others. The Milton Company was a defendant in that case, and, with the North Bloomfield mine, was enjoined from further hydraulic work. Complaint was made several months ago against the Milton Company, it being alleged that hydraulicking had been carried on. The master finds that the company has violated the injunction, and is guilty of contempt.

### PLUMAS COUNTY.

GENESEE.—Arrangements are making for starting up the mill for the coming season's work. It is said that extensive improvements on the property are contemplated this summer. Hoisting-works will be erected.

PLUMAS CONSOLIDATED MILL AND MINING COMPANY.—The company will soon begin running a tunnel to tap what is known as the Magna Charta chimney. The large air-compressor now in position will enable the company to make rapid progress.

### SAN BERNARDINO COUNTY.

ORO GRANDE.—The company is about to erect a sixty-stamp mill at the Waterloo mine in West Calico. When this mill is built, the company's fifteen-stamp mill near Daggett will be used to reduce the ore from the King mine, and the force of men prospecting the same will be increased sufficiently to extract ore enough to keep the mill running day and night.

## CANADA.

### PROVINCE OF NOVA SCOTIA.

EASTERN DEVELOPMENT COMPANY, LIMITED.—Reports up to January 29th show that, during the week previous, work was shut down for annual overhauling of compressors and hoisting apparatus. Work was then resumed, and a winze started on the new north vein 6 feet by 10 feet, the entire width of the ore at that point. The winze is down eight feet, and the ore in the bottom looks well. The cross-cut on the 200-foot level has been completed. It is 260 feet long, and it developed three parallel veins of ore, all dipping north from 65 to 70 degrees, with numerous veinlets dipping into the main veins. Samples of coke made at the International coal mines, near Sydney, have been received at the Boston office of the company. It is made from slack coal, and is of good quality.

JOGGINS COAL MINING ASSOCIATION.—The report presented at the annual meeting shows that the output last year amounted to 20,000 tons. No dividend was declared. The old board of directors was re-elected, as follows: Messrs. James Kennedy, Robert W. Cruikshank, D. W. Clark, John E. Irvine, and L. H. Vaughan. The meeting adjourned until February 16th, when a proposition for sale will be considered.

### PROVINCE OF ONTARIO.

RABBIT MOUNTAIN.—The company proposes to erect a smelting plant for the purpose of reducing its ore. No more concentrates will be shipped from this mine. At the last meeting of the board of directors, $20,000 were set apart to continue the work of developing the mine.

## COLORADO.

The Archuleta Oil District is to be developed. Over 4000 acres of land have been leased from the State.

The Supreme Court has decided that the Legislature could pass a law taxing mines. This action on the part of the court was in the nature of a reply to a legislative resolution, adopted on the 29th of January, inquiring as to the constitutionality of a law taxing the mines of the State. It was the purpose of the Legislature not only to get information on the point, but to receive an opinion on the claim put forth by the mining men that a law on the subject would be unconstitutional on the ground that the last Legislature had extended the time of non-taxation.

COLORADO COAL AND IRON COMPANY.—Fifty new coke-ovens will soon be added to the company's plant at Crested Butte.

### CLEAR CREEK COUNTY.

ATLANTIC AND PACIFIC RAILROAD TUNNEL COMPANY.—At the annual meeting, recently held at Denver, the company unanimously ratified a contract that Mr. Pomeroy lately made with Thomas Vernon, of England, for the completion of the tunnel for standard-gauge railroad service. The company will issue $2,000,000 of first mortgage bonds, running ten years, at 8 per cent interest, the English contractors taking the bonds in payment for completing the tunnel. Work on this tunnel was begun about seven years ago, intending it for mining purposes and the possibility of its being some time made available for a railroad. The tunnel starts into the main range sixty miles due west from Denver, at the base of Mount Kelso, and will pass under Gray's Peak 4400 feet below the surface. It will be 25,000 feet long, and will cut a large number of known gold and silver-bearing veins. Its possibilities in a mining way are great, though for prospecting purposes only it would be a costly enterprise. It is the greatest tunnel enterprise in the United States. The contract calls for the completion of the tunnel before the first day of June, 1890, ready for railroad service. Mr. Pomeroy states that a large amount of machinery required in the work is making in England, which will soon be on its way to this country.

COLORADO CENTRAL.—The output for January was 97 tons, which sold for $18,092.55. On account of low water to run the engine and compressor, the company reduced the force on ore to push sinking the shaft, which has attained a depth of 75 feet below the 650-foot level. The mine looks well.

COMMONWEALTH VS. N. M. BASS ET AL.—In the case of the Commonwealth Mining Company *vs.* N. M. Bass *et al.*—an adverse suit between the Little Mattie lode and the Apex claim of Clear Creek County—the jury gave a verdict for the plaintiffs. But Judge Hallett ruled that with the west 113 feet of the Apex they had nothing to do, and therefore dictated the verdict to read, "We, the jury, find for the defendants for 113 feet from the west or southwest end of the Apex claim, and that they are entitled to occupy and possess the same under the laws of the State and of the United States; and as to the remainder of said lode in controversy, we find that the plaintiff is the owner in fee." The Commonwealth Company owns the Little Mattie lode near Idaho Springs. It is a patented claim, and was located ten years ago. The defendants are the owners of the Apex claim, which was located in 1882. The case has been pending two years, and this is the third trial. The first trial resulted in a verdict for the Little Mattie lode, and the second trial ended in a compromise verdict, the jury dividing the ground.

SILVER AGE.—The report of Professor Regis Chauvenet to St. Louis people states that the mine is an excellent investment at the price for which it was offered. The report was accepted, and the terms of Mr. George S. Robertson, the owner, agreed to. In our last issue, we referred to the incorporation of this company. About twenty-five St. Louis capitalists have agreed to take 80,000 shares at twenty-five cents a share. No works will be erected, as the ore can be sold to the public sampling-works of Idaho Springs, or shipped directly to Denver. The average value of the ore is $125 a ton.

### GILPIN COUNTY.

GREGORY-BOBTAIL.—The heading of the inclined shaft of this company has been reached, and the diamond drill-hole that cut the body of water in the Gregory workings has been plugged up. It is understood that another and larger drill-hole will be bored, in order to get a larger amount of water to supply the large steam-pump, which has a capacity of easily throwing 1000 gallons of water a minute.

### GUNNISON COUNTY.

LEGAL TENDER MILLING AND MINING COMPANY.—This company has been organized, with a capital stock of $3,000,000, shares $10 each, to work a group of ten mines, to the sale of which we referred in our issue of January 22d.

### LAKE COUNTY.

ADAMS.—The company has passed its dividend. It is said to have $48,000 in its reserve fund. The building of a concentrating plant would, it is estimated, cost about $15,000.

ALLEGHANY.—The company has leased its property for two years to Messrs. Albert Johnson and W. A. Farish. The property is very desirably located, comprising claims so situated as to join the Small Hopes possessions on three sides. A former lessee found paying ore and made a small shipment. It is proposed to continue the Raven shaft, now down 340 feet, to a depth of one or two hundred more feet, if required.

BLACK TIGER.—This company has been organized by St. Louis people, with a capital stock of $1,500,000, shares $10 each, to work this mine, situated near Leadville. Operations will be vigorously prosecuted by the new company. The mine was opened last summer.

TIP TOP VS. FOREPAUGH.—In this suit, to which we referred in our last issue, the jury returned a verdict for plaintiff in the sum of $49,164.30. It is stated the plaintiffs are not satisfied with the verdict, and will sue for $120,000 additional.

### SAN JUAN COUNTY.

NORTH POLE.—Negotiations are pending with people in Europe for the sale of this group of mines, situated in Eureka Gulch. The group is composed of four patented claims, and is situated on the gold belt running through that section of country. These are old locations, having been located as far back as 1868. Negotiations were pending several years ago for the sale of this group of mines for $360,000. Considerable work has been done on these claims.

## CUBA.

Mr. James Witherspoon has just returned from Cuba, where he went four or five weeks ago to make surveys for the manganese company in which Carnegie & Co., Henry Phipps, and others, of Pittsburg, Pa., are interested. Mr. Witherspoon said that there could be no doubt of favorable returns for the money invested when the manganese mines are opened.

## GEORGIA.

ETOWAH IRON AND MANGANESE COMPANY.—The Etowah property consists of 17,000 acres, situated in Bartow, Whitfield, Cherokee, and Dade counties, Georgia, and is said to be one of the most valuable mineral properties in the Southern States, in a healthy and advantageous location. The new company has decided to expend between $500,000 and $600,000 on the property at once, locating furnaces, etc.

### LUMPKIN COUNTY.

GORDON.—The tests of ore taken from different portions of the mine are making, and, it is said, with fair results. The tunnel that is running to tap the main belt is pushed and the sluice line laid as the work is pushed forward. There has been one vein already tapped that shows up well.

PREACHER.—A strike is reported to have been made in the shaft, which has a depth of 110 feet.

## IDAHO.

### CUSTER COUNTY.

CHARLES DICKENS MINING COMPANY, LIMITED.—The negotiations for the Charles Dickens mine between an English company, to the organization of which we referred in our issue of August 28th, and the owners on this side, have at last been definitely closed, and that property will hereafter be operated by the Charles Dickens Mining Company, Limited, whose agent and general superintendent will be Mr. N. Treweek, of Salt Lake City. The first payment has been made, and the final payment is to be made on the 10th of March. The Charles Dickens has had a somewhat checkered career. It has turned out in the neighbor-

hood of half a million dollars, but by careless management, it is stated, the mine ran into debt to the amount of $72,000—mortgages to that amount having been held by Wells, Fargo & Co., McCornick & Co., and Col. George L. Shoup. To satisfy the claims, the mine was sold by the sheriff, as stated in the JOURNAL of August 7th, and was bought in by R. C. Chambers, who acquired the title on January 22d, and with whom the negotiations have just been conducted. A winter force of ten or twelve men has already started to work, and a mill will be erected in the spring.

## ILLINOIS.

CHICAGO IRON MINING COMPANY.—This company has been organized at Chicago, with a capital stock of $1,000,000; incorporators, Edward W. Mullen, J. I. F. Mullen, Charles L. Hinkie, Michael F. Lemon, and Edgar B. Coleman.

FLAGSTAFF SMELTING COMPANY.—This company has been organized at East St. Louis, under the laws of the State, with a capital stock of $200,000; incorporators, James E. Lyon, George E. Hutchinson, and Willam T. Mason.

HILLSBORO' COAL COMPANY.—This company has been organized at Hillsboro', to mine coal, with a capital stock of $10,000; incorporators, Charles A. Ramsey, T. A. Padin, Amos Miller, and others.

MARINE MINING AND MANUFACTURING COMPANY.—This company has been organized at Marine, to mine coal and fire-clay; capital stock, $50,000; incorporators, Louis Nolb, Henry Gehrs, E. M. Eaton, and others.

## INDIANA.

### HUNTINGTON COUNTY.

The recently reorganized gas and oil company in Huntington has sold a sufficient amount of stock to pay the expenses of sinking a well there. Arrangements have been perfected with the Lima (Ohio) Drilling Company to sink the well. All the available land that could be leased has been secured, and all the other preliminaries perfected.

### PULASKI COUNTY.

Reports state that oil was struck at Francesville at a depth of 625 feet.

## IOWA.

### JASPER COUNTY.

IOWA COAL AND FUEL COMPANY.—This company has bought the Pittsburg and Little Star, situated near Valeria, for $35,000. The company named was formed for the express purpose of buying these mines, with E. J. Cooper for Manager, and W. L. Guernsey, Secretary.

### POLK COUNTY.

For a year or more, Des Moines capitalists have been prospecting, not without encouraging developments. They have found gas, but as yet not the pressure needed for lighting or heating a city. The well has now a depth of 1700 feet.

## KENTUCKY.

The case of Applegate *vs.* the Lexington and Carter County Mining Company, the Eastern Kentucky Railroad, and the Means, Russell & Means Furnace Company, which has been on the docket for nine years, and was once taken to the Supreme Court of the United States, has been finally brought to an end in the United States Circuit Court at Lexington, by a verdict for the plaintiffs, which gives them 7000 acres of mineral and timber lands in the counties of Carter, Greenup, and Boyd.

## MICHIGAN.

### COPPER MINES.

The following shows the output of "mineral" of the reporting mines of the Lake Superior copper district for January, in comparison with the products for the same month of previous years:

| January. | 1887. Tons. | 1886. Tons. | 1885. Tons. | 1884. Tons. |
|---|---|---|---|---|
| Calumet & Hecla | 2,576 | 2,563 | 2,489 | 1,919 |
| Tamarack | *300 | 174 | .... | .... |
| Atlantic | 202 | 200 | 199 | 164 |
| Franklin | 202 | 204 | 170 | 176 |
| Quincy | 183 | 175 | 161 | 180 |
| Osceola | 158 | 165 | 152 | 208 |
| Huron | 104 | 127 | 119 | 72 |

*Approximate.

FRANKLIN.—The superintendent's report shows that the openings, except the 29th level north of No. 2 shaft, are showing a fair amount of stamp and barrel copper. The stopes throughout the mine are showing as well to-day as they have for years.

HURON.—The lode in No. 8 shaft continues to show as well as ever. The productive part of it is about 13 feet wide. The 14th level south of this shaft is poor at present, but the stope above it is giving some fair stamp rock. No. 6 shaft will soon be started to sink below the 14th level. The 14th level north of the shaft is still opening ground that will pay to stope. The lode in the winze, sinking 150 feet north from the 13th to the 14th level, is showing a good class of stamp copper.

OSCEOLA.—The Osceola cross-cut to the Calumet conglomerate had been extended 103 feet up to the 1st inst. The whole distance to go is about 775 feet.

### IRON MINES.

HARRIS LAND COMPANY.—There is said to be a movement on foot to reorganize the Harris Land Company. The company owns 2080 acres of land in the Huron Mountain District. The land was entered during the silver-lead excitement of 1864 by a pool, mostly residents of Rockland. The members of the pool have become scattered, and there being no competent person appointed to raise assessments, pay taxes, etc., the land has been sold for non-payment of taxes. Encouraged by the success of the Phelan Land Company, which had recovered its lands after neglecting to pay its taxes for a number of years, several of the Harris Land pool have concluded to hunt up such of the original owners as are living and employ an attorney to examine into the affairs of the company.

INDIANA.—The mine is to be pumped out, and the new company will begin active operations.

METROPOLITAN IRON AND LAND COMPANY.—At a meeting of the directors of this company, held in Milwaukee last week, a dividend of $3 was declared, payable March 15th. This company is stocked for 30,000 shares, and operates the Norrie mine and two properties at Metropolitan. These two mines, however, have not been worked to any great extent for the past few years, so that the Norrie mine, one of the best mines on the Gogebic Range, must be given the credit for earning the dividend. The find made on this property recently is about 120 feet from the west line, and the vein is found to be nearly 40 feet wide at a depth of only 30 feet from the surface. The Lake Shore Railroad Company has begun the construction of a track to the new find, and ore will be shipped from it at the opening of navigation. The Norrie will have about 25,000 tons of ore in stock by the opening of navigation, and it will ship at least 200,000 tons during 1887. In 1886, the Norrie shipped 130,000 tons.

## MISSISSIPPI.

### ADAMS COUNTY.

The discovery of iron ore near Natchez is reported.

### COPIAH COUNTY.

Coal is reported to have been struck at Beauregard, at a depth of 120 feet, while digging a well. A company is organizing to continue further explorations.

## MISSOURI.

### RALLS COUNTY.

VANDALIA COAL COMPANY.—The company has begun prospecting for coal one mile from New London.

## MONTANA.

### DEER LODGE COUNTY.

SAN FRANCISCO.—This mine, which was sold to a St. Louis syndicate for $160,000, is said to be an excellent prospect. It is located on the second ridge north of the Granite Mountain, one and a quarter miles distant. The owners have opened it by means of a tunnel, which, at a distance of 800 feet from the surface, struck large bodies of ore. The influx of water then became so great that they found machinery necessary to handle it, and not having the means to purchase the outfit, they sold it. The necessary machinery has been ordered, and as soon as it reaches the mine, the water will be pumped out and operations will be begun again. It will not be made a stock company at present, but after the property has been worked enough to determine its value, a company will be organized.

WEST GRANITE.—Sinking the main shaft is actively pushed. It has now a depth of 140 feet, and is thought to be about forty feet south of the vein first found in the tunnel. The principal stockholders have again pooled their stock for six months.

### GALLATIN COUNTY.

REPUBLIC.—The company's smelting-works at Cooke City have been closed down, the deep snow rendering it impossible to get ore from the mines to the smelter. The snow is over eight feet on the average. The smelting-furnaces will not begin work again before spring.

### JEFFERSON COUNTY.

GREGORY.—It is stated that E. W. Bach has been appointed receiver of this company. The mine is now entirely closed down, with the exception of the pumps, which are kept running to keep the works clear of water. We referred to the difficulty at this mine in our issue of January 29th.

### LEWIS & CLARKE COUNTY.

HELENA & RIMINI.—The Ten Mile Mining Company has sold the Eureka lode, on Red Mountain, for $20,000, to the Helena & Rimini Mining Company, just organized at Helena by S. T. Hauser, A. M. Holter, R. S. Hale, W. C. Child, A. M. Esler, William Coyne, Francis Pope, and W. E. Frederick. The three last named, with a few others, were the principal owners in the Ten Mile Company, which is now merged in the new organization. The new company will begin operations at once. The ore is to be treated at Esler's concentrating-works, west of the Helena, which have been purchased by the company.

## NEBRASKA.

### DOUGLAS COUNTY.

It is stated that a four-foot vein of bituminous coal has been found near Omaha, at a depth of 540 feet. This confirms the report in our issue of December 4th.

## NEVADA.

HUMBOLDT MILL AND MINING COMPANY.—This company has been organized, with a capital stock of $10,000,000, shares $100 each, for the purpose of mining and reducing precious metals, purchasing, holding, and selling mining claims and lands, and operating, purchasing, and selling mills and reduction-works in Humboldt County. The directors are: P. Henry and C. P. Moore, of Winnemucca, Nev.; F. G. Margetson and Stephen Otis, of San Francisco; and J. M. Buffington, of Oakland.

### STOREY COUNTY—COMSTOCK LODE.

From the Virginia City *Chronicle*, we take the following:

The pay-rolls of the different mining companies for January amounted to about $242,221.

CONSOLIDATED CALIFORNIA & VIRGINIA.—The superintendent's report for the week ended January 29th shows that during the week 1053 tons of ore were shipped to the Morgan mill, and 1824 tons to the Eureka mill. The average assay value of all the ore worked at both the above mills during the week, according to battery samples, was $36.10. Bullion valued at $74,000 was to be shipped to San Francisco January 30th.

POTOSI.—On account of the lack of storage capacity, work is suspended in the ore-breasts opened up above and below the 250 level until crushing facilities are obtainable.

SAVAGE.—Ore extracted from the 600 level will hereafter be hoisted to the surface through the Curtis shaft, and stored in the bins of the ore-dump. The bins of the Gould & Curry dump are all filled with Savage ore, hoisted from the 600 level through the Bonner shaft. On the 1640 level, the north drift is out 130 feet from the Sutro Tunnel line, and the south drift 95 feet. An east cross-cut is going into the vein 100 feet north of the tunnel line, the face of which is represented to be showing well.

### WHITE PINE COUNTY.

MARTIN WHITE.—The company will make contracts on very liberal terms with tributers to extract ore on shares from different points in the company's mines. It was demonstrated last summer that ore running thirty ounces in silver will pay a fair profit to mill under the process then adopted by the superintendent, and it is known that considerable ore of this value was left in the old workings by the former superintendents. The company is already working a force of men sinking a new shaft and running a drift to tap bodies of ore known to exist, which heretofore were thought too low grade to pay.

## NEW JERSEY.

### WARREN COUNTY.

IRON MOUNTAIN.—The sheriff has seized the personal property and lease of this company on Marble Hill, three miles from Phillipsburg, to satisfy labor and other claims amounting to $4500. At the office of the company in Philadelphia, says the *Evening Telegram*, it was stated that the company itself was in no way responsible for the debts of the contractors, Messrs. Kelley & Smith, and was not involved in the financial troubles that have resulted in the seizure. They made a contract for taking the ore from the mine, but the contractors have been unable to comply with their terms and to pay the bills.

## NEW MEXICO.

### GRANT COUNTY.

SHERIDAN.—The collapse of this company, which was brought out with glowing colors in St. Louis several months ago, has proved a disastrous affair, as already mentioned in our last issue. A meeting has been held by stockholders to devise some means of working the property, and it has been suggested that they should raise about $20,000 to prosecute further development-work and buy a group of four mines, the Four Hawks, situated about a mile from the Sheridan mine. This group is owned by the directors and some others, and it is easily understood why the purchase of these mines is advised. It appears also that the company owes the superintendent and the directors $60,000 for moneys advanced. A committee was appointed to examine the books and determine as to the best means of overcoming the present difficulties. In our report last week, it was also stated that Joseph E. Sheridan, the original owner, had sold out his stock and had disappeared. Later reports show that he is in St. Louis, and in an interview stated that the Sheridan was a good property, but that it had been grossly mismanaged, that it was a mere undeveloped property, and had been capitalized too high at $2,000,000. "At $200,000, and good management, it would have paid a fair interest on the investment."

## OHIO.

### FULTON COUNTY.

The people of Wauseon are still uncertain as to the value of their 2200-foot well. Gas was struck at 2100 feet, and experts claimed that the flow showed 100 pounds pressure. At 2150 feet, a pocket giving the drill a drop of five feet was struck, but no oil came up. At 2160 feet, oil was found and again a pocket. Boring was continued another eight feet, and then the well was shot with fifty gallons of nitro-glycerine. After the shooting, oil spouted to the top of the derrick, but since that time the well has been pumped with small results. It is claimed that the pumps are defective, but it is hoped that further boring will develop less oil and more gas. The well was sunk by a local stock company at an expense of nearly $5000. The directors of the company are determined to test the field, and the well will probably be put down still deeper.

FEDERAL VALLEY COAL COMPANY.—This company has been incorporated by William R. Utley and John C. Hertle, of New York City, and Charles F. Yung, of Brooklyn. The company has a capital stock of $300,000, and proposes to acquire and work coal lands in Ohio.

## PENNSYLVANIA.

The Knights of Labor of Mount Pleasant are organizing a co-operative store company in which only members of the order will be allowed to take stock. The shares are $5 each, and no stockholder will be permitted to hold more than ten shares. The stores will be built, one at Mount Pleasant and one at Bridgeport. A similar enterprise at Everson is said to have proved a great success.

### COAL.

BEAVER COAL AND COKE COMPANY.—A charter has been granted to this company, which will have its head-quarters at New Castle. The capital is $50,000. The object is to mine coal and burn coke.

PITTSBURG LAKE SUPERIOR COKE COMPANY.—A charter has been granted to this company, which has a capital of $50,000. The main office will be at Pittsburg.

PITTSBURG & WESTERN COAL AND MINING COMPANY.—This company has been organized, with a capital of $300,000, and owns a large tract of coal land in Butler County, on the Pittsburg & Western and the New York, Lake Erie & Western railroads, which it proposes to open up.

PHILADELPHIA & READING COAL AND IRON COMPANY.—The company has suspended all operations at East Franklin and Lower Rausch Creek collieries. The former colliery has not been worked since the Reading Company came into possession of it, but a number of hands have been employed in keeping the water out and in doing other necessary dead-work. At East Franklin, the company has expended a considerable sum the last few years in sinking and other improvements; but the management has concluded now to cease work entirely, and preparations are making to tear out the pumps and machinery.

### NATURAL GAS.

BADEN GAS COMPANY.—The company has practically changed, and will be operated on a new and larger basis hereafter. An almost entirely new board of officers and directors has been elected. Mr. Speck, the new president, went into the company a few months ago, and it is understood that he and Mr. S. E. Gill furnished most of the money to build the new pipe line that is running from Sewickley to Allegheny. The line will be completed next month, and the company will hold a meeting to vote on increasing its capital stock from $250,000 to $500,000. If the increase is made, the plant will be extended in other directions, probably down the river from Sewickley and through various sections of Alleghany and Pittsburg.

CHARTIERS VALLEY GAS COMPANY.—The company struck a strong well on the 3d inst. at Glenfield, about eight miles below Alleghany. The well will be an important feeder for the mains of the company running to Alleghany City.

MONONGAHELA CITY AND BELLWOOD NATURAL GAS COMPANY.—A large gas well has been struck near Monongahela City by this company. Several efforts have been made to reach gas, but without success here tofore. The well is thought to be very good, and was struck on the Fry farm, six miles beyond former developments, thus opening a new and important field. The company will increase its stock to $30,000, and begin to pipe Monongahela City.

PENNSYLVANIA GAS COMPANY.—This company brought in a new well on the McWilliams farm, near Canonsburg, on the 8th inst.

PHILADELPHIA VS. CHARTIERS VALLEY GAS COMPANY.—The Philadelphia Company has brought suit against the Chartiers Gas Company to recover $2182. Of this sum, $1068 is claimed for labor performed in assisting to extinguish a burning oil well belonging to defendant at Murrysville, on March 19th, 1886, when the conflagration threatened to destroy the town. The balance of $1114 is claimed for damage to a gas main under the Monongahela River that was broken by the defendant while dredging for the purpose of laying a similar main for its own use.

### OIL.

Exports of refined, crude, and naphtha from the following ports, from January 1st to February 5th:

| | 1887. Gallons. | 1886. Gallons. |
|---|---|---|
| From Boston | 519,570 | 358,452 |
| Philadelphia | 10,632,805 | 11,092,132 |
| Baltimore | 1,162,698 | 1,474,679 |
| Perth Amboy | 1,605,465 | ..... |
| New York | 35,391,837 | 37,631,260 |
| Total exports | 49,312,375 | 50,556,523 |

## SOUTH CAROLINA.

There were shipped in January from Charleston 18,770 tons of crude phosphate rock, against 21,595 in January, 1886.

## TENNESSEE.

PINE MOUNTAIN COAL, IRON, LAND, RAILROAD, AND MANUFACTURING COMPANY.—This company has been organized, with a capital stock of $500,000, by J. C. Wall, of Stevenson; J. W. Wall, J. R. Stevens, M. J. O'Shaughnessy, Huntsville; and J. F. O'Shaughnessy, of New York. Its object is to mine coal and burn coke on an extensive scale near South Pittsburg. The company owns between six and seven thousand acres of the best coal and iron lands in Tennessee. The greater part of the land is on the Cumberland Mountain and in the Sequatchie Valley. The company is driving four main entries into the coal. The following is an analysis recently made by Prof. A. F. Brainard, of Birmingham: Moisture, 3·06; volatile, 18·40; fixed carbon, 74·974; sulphur, ·576; ash, 2·990. This vein of coal runs from three to six feet in thickness. The company has another fine vein of block coal that runs three feet even in thickness, and is known in this section as the Battle Creek coal.

TENNESSEE COAL, IRON, AND RAILROAD COMPANY.—The company notifies its stockholders that they have the privilege of buying, at ten cents on the dollar, the fully paid non-assessable capital stock of the Ensley Land Company, of Jefferson County, Ala., to the amount of two million five hundred thousand dollars. Payment for and delivery of said stock to be made on or before the 1st day of April, at the office of the Central Trust Company, of New York, on which date this privilege will expire by limitation.

## TEXAS.

TEXAS MINING AND IMPROVEMENT COMPANY.—This company is leasing 100,000 acres of mineral lands, principally in Burnet County. It has leased several iron mines and two coal mines. It has experts in the field prospecting now. It has under lease the old Mexican silver mines that were worked some fifty years ago by Mexicans within fifteen miles of the great Marble Falls. The capital is $1,000,000, $60,000 paid up.

## UTAH.

### JUAB COUNTY.

MAMMOTH.—The quartz mill of this company at Tintic is to be started up again soon. The low-grade ores of the Mammoth will be used, which range from $15 to $40 in value per ton. The Mammoth mine continues to send out its usual amount of ore to the smelting-works at Argo, Colo.

## VIRGINIA.

### AUGUSTA COUNTY.

A company has leased about 10,000 acres in this county, belonging to the estate of John Wissler, and is developing it for manganese.

## WISCONSIN.

The following companies have been organized under the laws of this State:

JUNO IRON MINING COMPANY.—This company has been organized, with a capital stock of $1,000,000, by John M. Clark, John J. Reilley, and William Buckley.

MANUFACTURERS' LAND AND IRON COMPANY.—This company has been organized at Milwaukee, with a capital stock of $50,000, for the purpose of doing a general mining business; incorporators, Ernst Vitter, W. Roschenberger, William Wasweyler, Adolph J. Luscher, and George T. Campbell.

### BULLION PRODUCTION FOR 1886—SPECIAL OFFICIAL REPORTS.

| MINES. | States. | Month of December. | Year from Jan. 1st, 1886. |
|---|---|---|---|
| | | $ | $ |
| Alice, G. S | Mont. | ** | 1,054,796 |
| Belmont | Nev. | —— | 3,255 |
| Bodie Cons., G | Cal. | —— | 19,463 |
| Boston & Montana, G. | Mont. | ..... | 485,711 |
| Bulwer Cons., G. | Cal. | ..... | 70 144 |
| Caledonia, G. | Dak. | —— | 172 960 |
| Christy, S. | Utah. | ..... | 249,532 |
| Chrysolite, S. | Colo. | ** | 200,095 |
| Colorado Central, S. | Colo. | 18,506 | 264,944 |
| Daly, S. | Utah. | ..... | 677,884 |
| Deadwood-Terra, G. | Dak. | ..... | 548.164 |
| Derbec Blue Grav., G. S. | Cal. | ..... | 173,118 |
| Elkhorn, G. S. | Mont. | ..... | 175,620 |
| Empire, G. S. | Mont. | 21,000 | 75,000 |
| Eureka, S. L. | Nev. | 50,962 | 262.321 |
| Father de Smet, G. | Dak. | —— | 61,376 |
| Freeland, G. S. C. | Colo. | 23,870 | 297.758 |
| German Consolidated, G. | Colo. | ..... | 53,673 |
| Granite Mountain, S. | Mont. | ..... | 1,428,300 |
| Head Center Cons., S. | Ariz. | —— | 4,633 |
| Head Center & Tranq., S. | Ariz. | —— | 25,818 |
| Hecla, G. S. L. C. | Mont. | 29,861 | 585,151 |
| Helena, G. S. L. C. | Mont. | ..... | 240,234 |
| Holmes, S. | Nev. | —— | 403,521 |
| Homestake, G. | Dak. | ..... | 969,883 |
| Hope, S. | Mont. | ..... | 146.018 |
| Independence, S. | Nev. | —— | 15,000 |
| Iron Hill, S. | Dak. | ** | 383,346 |
| Iron Silver, S. G. | Colo. | —— | 516,319 |
| J. D. Reymert, S. | Ariz. | —— | 5,771 |
| Kentuck, S. | Nev. | —— | *3,346 |
| Lexington, G. S. | Mont. | 63,875 | 860,886 |
| Montana Limited, G. S. | Mont. | 202,000 | 1,724,800 |
| Moulton, G. S. | Mont. | 52,991 | 731,227 |
| Navajo, G. S. | Nev. | —— | 138 944 |
| New Pittsburg, S. | Colo. | —— | 6,330 |
| North Belle Isle, G. S. | Nev. | —— | 20,285 |
| Ontario, S. | Utah. | ..... | 1,540,171 |
| Plymouth Consolidated, G. | Cal. | ..... | 565,511 |
| Plutus, G. L. C. | Colo. | 4.788 | 145,783 |
| Ropes, G. S. | Mich. | 4.389 | 41,384 |
| Silver King, S. | Ariz. | 88,602 | 853,187 |
| Small Hopes Cons., S. | Colo. | 71,541 | 1,038,792 |
| South Yuba, G. | Cal. | —— | 2,077 |
| Standard Consolidated, G. | Cal. | 12,026 | 216.411 |
| Stormont, S. | Utah. | 12,356 | 144 068 |
| Tombstone, G. S. L. | Ariz. | —— | †**491,070 |
| Total | | ..... | $18,079,394 |

G., gold; S., silver; L., lead; C., copper; M., mica. Silver valued by the different companies from $1@$1.29 per ounce; gold, $20.67. † Not including value of lead and copper. ** Silver valued at $1.29. * Royalty. ‡ Net. § Ore sales. ‖ Not official. —— No shipments during month mentioned.

## MARKETS.

NEW YORK, Friday Evening, Feb. 11.

**Prices of Silver per ounce troy.**

| Feb. | Sterling exchange | Lond'n Pence. | N. Y. Cents | Feb. | Sterling exchange | Lond'n Pence. | N. Y. Cents |
|---|---|---|---|---|---|---|---|
| 5 | 4.88 | 47 | 10⅜ | 9 | 4.88 | 46⅜ | 101¼ |
| 7 | 4.88 | 46¾ | 102 | 10 | 4.88 | 46⅜ | 101¼ |
| 8 | 4.88 | * | 101¼ | 11 | 4.88 | 46⅜ | 101⅝ |

* Nominal.

Rates were first depressed by a fall in the Eastern

exchanges and then advanced by a rise of 1 per cent in the Bank of Bengal rate.

*Foreign Bank Statements.*—The governors of the Bank of England, at their weekly meeting to-day, made no change in the minimum rate of discount, and it remains at 4 per cent. During the week, the bank gained £385,000 bullion; and the proportion of its reserve to its liabilities was raised from 47·70 to 50·07 per cent, against 47⅛ per cent at the same time last year. On the 10th inst., the bank gained on balance £47,000 bullion. The weekly statement of the Bank of France shows a gain of 650,000 francs gold and a loss of 1,450,000 francs silver. The weekly statement of the Imperial Bank of Germany shows a specie increase of 10,360,000 marks.

**Copper.**—This market is without any feature; in fact, there are no transactions to report, the Lake companies being, apparently, unwilling to bring in copper at 11 cents, and manufacturers being supplied temporarily by the Calumet & Hecla. Great dissatisfaction is expressed by manufacturers, and especially by its own stockholders at the action of this company in reducing the price a cent a pound to the present 11 cent basis. Unless we are greatly mistaken, the dissatisfaction of the stockholders of the Calumet & Hecla Company will make itself known in urgent demands that the company make full reports of its business, as other lake companies do, and as it is universally believed it would be to the interest of this company to do.

We quote Lake 11@11½c., and scarcely enough business in casting brands to establish prices.

We are advised by letter under date Butte, February 3d, and confirmed by telegram of the 8th inst., that both the works and mines of the Anaconda Company have stopped work, and it appears probable from several circumstances will not start before spring. The want of coal, which Mr. Haggin had considerately allowed the railroad company to take, was given as the immediate cause of the stoppage, and some of the officers of the company are reported to have said that they will not start work until at least one month's supply of coal is on hand.

The Mountain Chief and the Gray Eagle copper mines have also closed down for the present.

The Copper Queen, it is expected, will soon start up its new furnace.

Chili Bars in London are quoted to-day at £39 7s. 6d., an advance of 12s. 6d. during the week.

**Tin.**—This market has been off somewhat, and quiet, with sales at the Exchange aggregating 100 tons during the week, at $22.45@$22.70 for February, March, and April tin.

Cable advices to the Exchange to-day quoted spot Straits £101 10s., and for futures £102 5s.

**Lead.**—The advance noted in our report last week continued, and sales were made at 4·50c., to the aggregate amount of nearly 1000 tons. The price then gave way, and perhaps 500 tons more were sold at 4·45c., at which it is now offered.

The buyers all came on at once and made the little flurry, but now they are supplied for a short time and can not be tempted by even lower prices.

The very low prices of white lead are beginning to reduce corroding stocks. We hear 5½@5⅝c. asked for White Lead, a price quite unprofitable to Corroders.

Cable advices to the Metal Exchange to-day quote Soft Spanish Lead £12 12s. 6d.

Messrs. Everett & Post, of Chicago, telegraph as follows to-day:

Market quiet and dull. Values nominally 4·30@4·25c. Sales during the week, 700 tons at 4·20c., 4·25c., 4·27½c., and 100 tons at 4·30c. Closes nominally 4·25c. bid.

Messrs. John Wahl & Co., of St. Louis, telegraph as follows to-day:

Market does not reveal any activity, but, on the other hand, shows no sign of weakness, holders having quite frequent inquiries for small lots maintaining prices fairly well, and the recent advance bids fair to be lasting. Stocks in hands of holders are but limited. Sales for the week sum up probably 400 tons of Common at 4·17½c., 200 tons Refined at 4·20c.

**Spelter.**—The London market by cable advices to-day quotes £14 10s. for Silesian. We quote 4·40@4·60c., according to brand, and 6½@7c. for New Jersey.

*New Jersey Zinc Oxide*, 4@4½c., according to grade.

**Antimony.**—Cables to the Metal Exchange to-day quote Hallett's at £30. The market here remains at 7½@7¾c. for Hallett's and 9c. for Cookson's.

**Quicksilver.**—The market is quiet. We quote about $41 per flask, and in London £7 7s. 6d.

**Nickel.**—We quote 60c.

**Aluminium**—Is quoted at 90c.@$1 an ounce.

MOVEMENT OF BONDED METALS, PORT OF NEW YORK, JANUARY, 1887.

| METALS. | Imports. | Withdrawn. | Exports. | Stocks. Feb. 1. |
|---|---|---|---|---|
| Iron ore | 86 tons | tons. | ..... | ..... |
| Pig-iron | 2,575 " | 100 | 151 tons | 2,543 tons |
| Spiegel-iron | 4,301 " | 158 | ..... | 843 " |
| Old rails | 7,485 " | ..... | ..... | 2,580 " |
| Scrap-iron | 1,315 " | 499 | ..... | 1,841 " |
| Scrap-steel | 925 " | ..... | ..... | 870 " |
| Steel blooms and billets | 4,954 " | ..... | ..... | ..... |
| New steel rails | 107 " | ..... | 13 " | 135 " |
| New iron rails | ..... | ..... | ..... | 12 " |
| Wire and nail rods | 6,446 " | 167 | ..... | 9,848 " |
| Iron bars, etc. | 879 " | 1 | 5½ " | |
| Iron beams | 131 " | ..... | ..... | ..... |
| Sheet iron | 125 " | 9 | 41 " | 1,773 " |
| Steel sheets | 21 " | ..... | ..... | ..... |
| Cotton ties | ..... | ..... | ..... | 554 " |
| Steel tires and forgings | 219 " | ..... | ..... | 62 " |
| Steel tubes | 69 " | ..... | ..... | ..... |
| Steel bars, etc. | 542 " | bxs | 1½ tons | 74 " |
| Tin plates | 80,732 bxs. | 21,067 | ..... | 65,977 bxs. |
| Taggers' iron | 1,035 " | ..... | ..... | ..... |
| Pig-tin | 781 tons | ..... | ..... | ..... |
| Copper ore | ..... | ..... | 131 " | ..... |
| Copper matte | 46½ " | ..... | | ..... |
| Ingot copper | 68,750 lbs. | lbs. | 2,076,289 | ..... |
| Copper (old) | 600 " | 451 | lbs. | 66,349 lbs. |
| Brass (old) | ..... | tons. | ..... | 11,561 " |
| Pig-lead | 3 tons | 129 | ..... | 2,305 tons |
| Lead (old) | ..... | ..... | ..... | 468 lbs |
| Spelter | 222 " | ..... | 5 tons | 49 tons |
| Sheet-zinc | 83 " | ..... | ..... | 11 " |
| Scrap-zinc | ..... | cks. | ..... | 13,400 lbs. |
| Antimony | 369 cks. | 11 | ..... | 100 cks. |
| Nickel | 25,810 lbs. | ..... | ..... | 5,512 lbs. |

## IRON MARKET REVIEW.

NEW YORK, Friday Evening, Feb. 11.

**American Pig.**—This market, as is the case in all the other markets throughout the country, shows much less excitement than a few weeks ago; it is, in fact, quiet though strong. Quite large purchases of foreign pig have been made, and this steadies the home market so that the top appears to be reached, unless indeed a considerable increase in prices abroad should take place.

We quote Standard Lehigh and North River brands $22@$22.50 for No. 1 X, and $21 for No. 2 X. Forge is scarce at $19. Southern irons are but little heard of in this market at present, the West offering better prices. We hear that the Alabama furnaces, except Oxmoor, which is chronically in trouble, are working better than ever before. The Sloss, in particular, is said to be doing well, and all are "coming money." Nevertheless, it appears certain that before the year is out several furnaces will be short of fuel; for the opening of coal mines has not kept pace with the growth of the iron business.

**Scotch Pig.**—There has been no change in this market, and we continue to quote the following prices, which are those at which Scotch iron can be imported; but as much of what is now coming in was contracted for at lower prices, the iron is actually sold in most cases below the price at which it could now be imported.

The Glasgow quotations are lower than for a few weeks past.

We quote Coltness, $22.75@$23.25; Summerlee, $22.50@$23; Clyde and Dalmellington, $21@$21.50; Gartsherrie, $22.50@$23; Glengarnock, $22@$22.50; Eglinton, $21.

Cables to the Metal Exchange to-day quote: Coltness, 58s.; Langloan, 53s. 6d.; Summerlee, 55s. 6d.; Gartsherrie, 51s. 6d.; Glengarnock, 51s. 6d.; Dalmellington, 48s. 6d.; Eglinton, 46s.; Warrants, 43s. 11d.; Middlesboro', No. 3, 36s. Freights are 8@9s.

**Bessemer Pig.**—Very large purchases have been made of foreign Bessemer pig during the past few weeks, on account principally of Western mills. These purchases, it is said, will aggregate 50,000 tons, and the price is said to have been $21.25. We continue to quote $19.50@$20.50 at furnace for Domestic. Foreign is $20.50@$21.50.

**Spiegeleisen.**—This market is quiet, and prices remain at from $27.50@$28.50 asked for both English and German 20 per cent Spiegel.

**Steel Blooms and Billets.**—There has been nothing worthy of note in this article. A steady business is being done, and the greater quietness in this market causes less inquiry for foreign blooms. Prices continue at from $30@$30.50 for Rail Blooms. Billets, $32@$33, according to size and quality. Nail Slabs, $32.50@$33.50. American Charcoal Blooms, from $54@$56. Scrap Blooms, $35@$36.

**Steel Rails.**—We learn of a sale of nearly 4000 tons to a New England road at $40, at the mill, but in general the market is very quiet. The capacity of our steel mills is increasing, and as the make during the second half of 1886 was at the rate of nearly 2,000,000 gross tons a year, we shall, no doubt, exceed this amount considerably in the current year. We quote $39@$40 Eastern mills. For English rails, we quote $40@$41.

**Structural Iron and Steel.**—This market shows great activity, and our mills are quite well supplied with orders for months ahead. We quote: Bridge Plate, 2·4@2·5c.; Angles, 2¼@2½c.; Tees, 2½@2¾c.; Steel Angles, 2·5@2·6c. American Beams and Channels, 3·3c., base from dock.

**Steel Plates.**—We quote: Tank, 2·85@3c.; Boiler and Ship Plates, 3@3¼c.; Flanges, 3½@3¾c.; Extra Flange and Fire-Box Plate, 4½@4¾c.

**Merchant Steel.**—There is no change from the Association rates. We quote: American Tool Steel, 7½@10c.; special qualities, 11@20c.; Crucible Machinery, 4@4·5c.; Bessemer and Open-Hearth Machinery and Spring, 2·7c.; Sleigh Shoe, 2·4c.; Open-Hearth and Bessemer Cutlery, 3·2c.

**Plate Iron.**—We quote: Common Tank, 2·45@2·55c.; Refined, 2·50@2·60c.; Flange Iron, 3·7@3¾c.; Extra Flange, 4·25@4½c.

**Bar Iron.**—We quote: Refined at 2·25@2·50c.; Common, 2@2·10c. There is not much probability of any considerable advance in these prices, unless the foreign market should also advance.

**Cast-Iron Pipe.**—We quote $30 for 36-inch pipe up to $37 per ton for 4-inch.

**Rail Fastenings.**—Prices have advanced for Spikes to 2·75c. a pound; Angle Fish-Bars remain at 2¼c.; Bolts and Nuts at 3½@3¾c.

**Scrap.**—The market is quiet. We continue to quote $24@$25 for Wrought Yard Scrap. Foreign Scrap is offered at $23@$23.50.

**Old Rails.**—On account of sales by weak speculators, there has been a weaker feeling, and prices stand for Double-Heads at from $22.50@$26, and for Tees at $24@$25.

**Philadelphia.** Feb. 11.

[From our Special Correspondent.]

*Pig-Iron.*—The slight reaction in the pig-iron market is natural enough, and prices, so far as sales show, are no lower. But little material is offered, and the companies, both large and small, are content to let things quietly take their own course. The fact that the principal companies are so far oversold accounts for the firmness of prices in all grades, from special brands down to ordinary. A few lots of No. 1 Foundry were taken yesterday and to-day at $22. No. 2 sold at $19.50. The better brands are not easily picked up. In mill iron, nothing has been done excepting that a few mill-owners have made offers for April and May consumption, and are willing to pay $19 for the kind of iron they are wanting. The best brands are selling in a small way at $19.50 and $20, and it is probable that, if the present feeling keeps up, prices will weaken a little.

*Muck-Bars.*—One lot of Muck-Bars was contracted for at $35 at mill.

*Foreign Material.*—Two ten thousand ton lots of Bessemer were contracted for. A few more inquiries have been received this week, though no business was done. Brokers are anxious to close, and are advising the placing of orders at present, as some of them think that, later in the season, there is a danger of a further advance.

*Steel Rail Blooms.*—Steel Rail Blooms are quoted at $30.50@$31. Domestic Slabs are $33.50.

*Manufactured Iron.*—A fine business is done on the 2·10c. basis. Common iron is selling at 1·90c. Small lots of Refined have brought 2·20c., and store prices are 2·25@2·30c. There is not quite so much anxiety about late deliveries.

*Nails.*—Dull at $2.50, less ten cents wholsale at seaboard. Makers are willing to enter into large contracts at these figures, but not at any thing less. The danger of overproduction is kept in sight.

*Plate and Tank Iron.*—Only a small week's business has been done at a 2·50c. basis for Plate and Tank;

but as the mills have abundance of business on hand, they are not looking up any.

*Skelp Iron.*—Skelp iron is quoted at 2·25c., firm, with large sales reported.

*Wrought-Iron Pipes.*—Inquiries are again increasing in number and quantity, and the capacity will be largely oversold soon.

*Structural Iron.*—A very large amount of business is done from week to week on a basis of 2·30c. for Angles, and 3·30c. for Beams and Channels. A contract was recently placed for a million dollar bridge in the West.

*Steel Rails.*—Steel rail makers have nothing new to add, and are doing more or less business for summer delivery at $39@$40. Large buyers are awaiting developments, and think that they will yet have opportunities to place five and ten thousand ton lots for fall delivery at considerably below present quotations.

*Old Rails.*—Prices are firm, and $24 is now offered buyers, who are not in any very urgent need.

*Scrap Iron.*—Not so strong, but is is still in good demand, and sales were made of selected this week at $24.50. All kinds of scrap are in good demand, and the prospects are, that every thing that can be delivered within the next thirty days will sell at good prices.

**Pittsburg.** Feb. 10.

[From our Special Correspondent.]

We report a moderately active market, without that anxiety to invest that prevailed a few weeks ago. This, however, is nothing more than natural when taking into consideration the heavy transactions in iron during the past five months. Many leading firms have a fair supply of the raw material on hand, sufficient to run the works for some time; hence they are not disposed to visit sellers any more than is actually necessary. At the same time, they keep an eye on the main chance, and, if a lot of iron is offered, as is sometimes the case, by outside dealers at a shade below current rates, the said parties seldom leave town without finding purchasers. The fact is, money is plenty at all times for such purposes. This also makes prices appear somewhat irregular, and those not posted think sometimes that there is some mistake about the transactions, as the prices are not uniform for the same class of iron. It seems to be the general opinion that there is no further advance in sight at this time; but then prices of iron are like "the white man—very uncertain." The Eastern market shows a decidedly weaker feeling, so far as reports go. In this market, there has been a falling off in sales of imported iron. Still, taken as a whole, a good business was transacted. Old iron rails are less fancied, the tendency being to lower prices. The offerings are increasing. We hear of several round lots of imported that have been in search of a purchaser for several days without finding one. Several large loads are on the way here by the Ohio River. Some 1500 tons have arrived; others will be along before the close of the month. New steel rails have advanced during the week one dollar a ton. Bar iron and nails are unchanged.

| *Coke or bituminous:* | $ | $ |
|---|---|---|
| Foundry No. 1 | 21.50@ | 22 00 |
| Foundry No. 2 | 21.00@ | 21.50 |
| Gray F., No. 3 | 20.50@ | .... |
| " " No. 4 | 19.50@ | 20.00 |
| White | 19.00@ | 19.50 |
| Mottled | 19.50@ | 20.00 |
| Silvery | 19.00@ | 20.00 |
| Bessemer | 21.75@ | 22.25 |
| *Charcoal:* | | |
| Foundry No. 1 | 24.00@ | 25.00 |
| Foundry No. 2 | 23.00@ | 24.00 |
| Cold-Blast | 27.00@ | 30.00 |
| Warm-Blast | 24.00@ | 25.00 |
| 20 p. c. Spiegel. | ....@ | 31.00 |

| | $ | $ |
|---|---|---|
| Muck-Bar | 35.50@ | 36.50 |
| Steel Blooms | 34.50@ | 36.00 |
| Steel Slabs | 33.00@ | 35.00 |
| Steel Crop Ends | 24.50@ | 25.00 |
| St'l Bl'm Ends | 24.00@ | 25.00 |
| Old Iron Rails | 28.50@ | 29 50 |
| Old Steel Rails | 24.00@ | 25.00 |
| No. 1 W. Scrap | 25.00@ | 26.00 |
| No. 2 W. Scrap | 22.00@ | 23.00 |
| Steel Rails | 40.00@ | 41.00 |
| " light sect's | 40.00@ | 45.00 |
| Bar Iron | 2.00@ | ..... |
| Nails $2.50 net car lots. | | |
| Steel Nails $2.50 net car lots. | | |

SALES SINCE LAST REPORT.

| Tons. | | | |
|---|---|---|---|
| 1000 | Gray Forge, Coke and Coal Smelted Lake Ore | | 20.50 cash. |
| 500 | Gray Forge, Coke and Coal Smelted Lake Ore | | 21.00 4 mo. |
| 1500 | Bessemer, Coke and Coal Smelted Lake Ore | | 22.75 cash. |
| 1000 | Bessemer, Coke and Coal Smelted Lake Ore | | 22.50 cash. |
| 1000 | Bessemer, March, Coke and Coal Smelted Lake Ore | | 23.00 cash. |
| 800 | Imported Bessemer, Coke and Coal Smelted Lake Ore | | 23.00 cash. |
| 200 | No. 1 Foundry, all ore, Coke and Coal Smelted Lake Ore | | 23.00 4 mo. |
| 100 | No. 1 Foundry, all ore, Coke and Coal Smelted Lake Ore | | 22.75 4 mo. |
| 25 | No. 2 Foundry, Coke and Coal Smelted Lake Ore | | 21.00 cash. |
| 1000 | Gray Forge, Coke, Native Ore | | 21.00 4 mo. |
| 500 | " " " " | Neutral | 20 50 cash. |
| 500 | No. 1 Mill, " " " | | 20.00 cash. |
| 500 | Gray Forge, " " " | | 20.00 cash. |
| 300 | No. 1 Mill, " " " | | 20.00 cash. |
| 50 | No. 2 Foundry, Coke, " " | | 21.00 cash. |
| 140 | Off-Grade Foundry, Charcoal | | $22.00 cash. |
| 30 | Cold Blast, " | | 30.00 cash. |
| 1000 | Nail Slabs, Steel Billets | | 35.00 cash. |
| 700 | " " | | 35.50 cash. |
| 380 | Steel Billets | | 35.50 cash. |
| 1000 | Spot Muck-Bar | | 37.00 cash. |
| 875 | March " | | 37.25 cash. |
| 500 | " " | | 37.50 cash. |
| 800 | American 5s, Steel-Wire Rods | | 46.00 cash. |
| 1200 | Grooved, Skelp Iron | | 2 4 per cwt. |
| 500 | Sheared, Skelp Iron | | 2·6 per cwt. |
| 1000 | Imported Ts. Old Iron Rails | | 28.50 cash. |
| 700 | Imported D. H., " " | | 29.50 cash. |
| 500 | American Ts, " " | | 29.00 cash. |

**Louisville.** Feb. 9.

[Reported by GEORGE H. HULL & CO.]

The market has continued quiet during the entire week, and shows a decline of about fifty cents a ton over the highest point reached last week. There is very little inquiry and very little iron offered. Both buyers and sellers seem to be well contented with the slack-up of the demand and the advance.

We have revised quotations as below:

PIG-IRON.

| | | |
|---|---|---|
| Southern Coke, No. 1 Foundry | $21.50@ | $22.00 |
| " " No. 2 " | 20 50@ | 21.00 |
| Hanging Rock Coke, No. 1 Foundry | 21.00@ | 21.50 |
| Southern Charcoal, No. 1 Foundry | 22.00@ | 23 00 |
| Silver Gray, different grades | 20.00@ | 20.50 |
| Southern Coke, No. 1 Mill, Neutral | 19.50@ | 20.00 |
| " " No. 1, Mill, Cold Short | 19.00@ | 19.50 |
| " Charcoal, No. 1 Mill | 20.50@ | 21.00 |
| White and Mottled, different grades | 17 50@ | 18.50 |
| Southern Car-Wheel, Standard Brands | 26.00@ | 27.00 |
| Hanging Rock, Cold-Blast | 27.00@ | 28 00 |
| " " Warm-Blast | 23.00@ | 24.00 |

## COAL TRADE REVIEW.

NEW YORK, Friday Evening, Feb. 11.

### Statistics.

**Production Bituminous Coal** for week ended February 5th, and year from January 1st:
Tons of 2000 pounds, unless otherwise designated.

EASTERN AND NORTHERN SHIPMENTS.

| | 1887. Week. | 1887. Year. | 1886. Week. | 1886. Year. |
|---|---|---|---|---|
| Phila. & Erie RR. | ..... | ..... | 39 | 168 |
| **Cumberland, Md.* | 45,657 | 229,824 | 37,642 | 105,975 |
| *Barclay, Pa.* | 3,904 | 17,078 | 3,553 | 23,635 |
| **Broad Top, Pa.* | | | | |
| H. & Broad Top RR. | 7,553 | 41,514 | 6,102 | 26,185 |
| East Broad Top | ..... | ..... | ..... | ..... |
| *Clearfield Region, Pa.* | | | | |
| Snow Shoe | 3,971 | 18,383 | 3,007 | 14,636 |
| Karthaus (Keating) | 4,295 | 21 884 | 1,636 | 10,352 |
| Tyrone & Clearfield | 54,886 | 290,754 | 59,914 | 261,199 |
| *Alleghany Region, Pa.* | | | | |
| Gallitzin & Mountain | 18,710 | †103,805 | 15,803 | 56,852 |
| *Pocahontas Flat Top Coal.* | | | | |
| Norf'k & West. RR. | 22,746 | 107,841 | 8,336 | 75,962 |
| *Kanawha Region, W. Va.* | | | | |
| Ches. & Ohio RR. | †40.000 | 162,352 | †35,000 | 129,882 |
| Total | 201,722 | 993,435 | 171,082 | 794,846 |

* Tons of 2240 lbs. † Estimated.

WESTERN SHIPMENTS.

| | | | | |
|---|---|---|---|---|
| *Pittsburg Region, Pa.* | | | | |
| West Penn RR. | 6,498 | 35,423 | 3,291 | 23,228 |
| Southwest Penn. RR. | 3,7 9 | 17.428 | 2,712 | 10,206 |
| Pennsylvania RR. | 5,010 | 24,254 | 4,541 | 22,859 |
| *Westmoreland Region, Pa.* | | | | |
| Pennsylvania RR. | 25,106 | 149,071 | 23,012 | 123,343 |
| *Monongahela Region, Pa.* | | | | |
| Pennsylvania RR. | 8,079 | 40,349 | 3,177 | 15,870 |
| Total | 48,872 | 266,525 | 37,363 | 195,506 |
| Grand total | 250,594 | 1,259,960 | 208,445 | 990,352 |

**Production of Coke** on line of Pennsylvania RR. for week ended February 5th, and year from January 1st:
Tons of 2000 pounds.

| | 1887. Week. | 1887. Year. | 1886. Week. | 1886. Year. |
|---|---|---|---|---|
| Tyrone & Clearfield | 201 | 1,124 | ..... | ..... |
| Allegnany Region. | 4,767 | 23,491 | 4,190 | 19,145 |
| West Penn. RR. | 2,083 | 10,531 | 2,308 | 9,598 |
| Southwest Penn. RR | 73,166 | 328 188 | 8,895 | 148,668 |
| Penn. & W. Region | 7,256 | 38,396 | 7,421 | 29,321 |
| Monongahela | 2,965 | 19,231 | 441 | 5,573 |
| Pittsburg Region. | ..... | 34 | ..... | ..... |
| Snow-Shoe | 1,071 | 5,115 | 746 | 3,728 |
| Total | 91,509 | 426,020 | 24.001 | 216,033 |

### Anthracite.

Since our last, the movement of coal has increased so much, and the coal companies have succeeded so well in managing their own affairs, without the assistance of the Knights of Labor, that they take but little interest in the strike. There are still plenty of men to do the work, and the only disadvantage in employing such labor as offers is, that it is inexperienced, and it takes a little time at first to become expert in performing the duties demanded. The companies have made a very creditable fight, but they came very near to being embarrassed by the apparent officiousness of President Corbin, if the stories be true that he offered his services to the men to procure arbitration on the part of the other companies. Recently we were discussing the coal trade situation with a capitalist largely interested in one of the great coal companies. When we asked him what position Mr. Corbin would take in relation to the coal combination, he replied, "There will be no trouble with him; he always accepts what he can get." There is an impression that this spirit prevailed in his negotiations with his own men this week. Mr. Corbin is noted for his grinding economies. There can be no question that there was room in the management of the Reading Company for legitimate economies; but it is a question whether Mr. Corbin is not driving matters so far that he will find himself in some great emergency with a vindictive body of employés who are supported by the entire community along the line of his road. It is very evident that the higher grades of employés are ground down and compelled to submit to indignities to an extent that is robbing them of their manliness, and greatly reducing the efficiency of their services.

The greatest curse the coal trade has had to contend with has been stock speculation. Since the Corbin party went into power, this has been increased beyond any thing ever known before. As barefaced as the acts of some officers of other coal companies have been they have never permitted their stock brokers to publicly represent them in the important matters of business for the companies. The prominence given to the name of the firm of Maxwell and Graves, Mr. Corbin's brokers, in connection with the strikes during the past week, is very unfavorably commented upon in the coal trade and elsewhere.

In evidence before the Assembly Committee to investigate the cause of the strikes, Mr. F. A. Potts said a few days ago, that it costs from $1.50 to $1.75 a ton to mine, prepare, and put anthracite coal aboard of the cars at the mines, including royalty. Mr. E. R. Holden expressed the opinion that it costs ¾ of a cent per ton per mile to transport coal from the mines to tide-water, exclusive of terminal expenses, and that the cost of mining is $1.50 a ton. Assuming 10 cents a ton as the terminal expenses, and 160 miles as the average haul, the cost of putting coal on board vessels at Hoboken would be $2.80 a ton. This would indicate that, if the proper charges were made last year, the net results must have been far from satisfactory to the coal mining and carrying companies.

The demand for coal is, of course, far in excess of the supply, and all indications point to a scarcity for months to come. The question of a new coal combination is, for the time, an unimportant one; the only serious question is that of transportation. The companies will be able to control prices to their own liking; but there are no indications that they will take advantage of their customers.

### Bituminous.

A gentleman handling a large quantity of this coal says that the problem now is to supply 10,000 tons of the most pressing wants with 1000 tons of coal. There is none of this class of coal selling, as the demands on contracts are far in excess of the ability of the coal companies to meet them. The movement is much more free, owing to a removal of ice and a better supply of vessels. The movement from South Amboy is improving as the new men become more familiar with their duties. The combination to be known as "The Bituminous Association," is said to be making satisfactory progress in the settlement of important details. All orders taken now are at prices that may be current at the time of delivery. The nominal prices now are those named in circulars.

**Buffalo.** Feb. 10.

[From our Special Correspondent.]

There is nothing new in the situation of the anthracite coal trade; wholesale circular prices for February have not been changed, and there are no indications that retailers will obtain any advance. Business continues brisk, and no complaints are made of scarcity; therefore, presumably, none exists. Our winter, thus far, has been cold, and the calls upon our house supplies have been heavy, as may be noticed by the visits of the loaded coal-wagons to consumers in all parts of the city. Manufacturing establishments using anthracite have been large purchasers, as all business interests are prospering.

The bituminous coal trade is good, and prices quoted about the same. Some varieties, being more in demand than others, bring a small advance, in consequence of the limited supply on hand.

The coke trade is up to the average as regards the demand for the past three months, which has been light, in consequence of the advance in price and scarcity. Many persons have been and are using coal, the result of the Lehigh figures ruling. There is no decline in rates expected for two or three months, or until the pressure is over and better facilities given by railroads. The present prices are, per 2000 pounds on track

$5.20 for Connellsville and $4 for Reynoldsville to consumers here, and 25c. additional at the bridges at Niagara Falls and Black Rock. The cost of coke at the ovens at Connellsville is now $2.30 per net ton.

A query: If the prohibition of free passes can be assured by the provisions of the Interstate Commerce Bill, why should not railroad fares be reduced? and if reduced, would not the result be a very large increase of passenger traffic and a consequent benefit to stockholders? It is well known that those who travel on passes, as a general rule, are not directly or indirectly entitled to the favor on general principles. Like press tickets to the theaters, outsiders as a rule receive at least three fourths of them. The latter is my experience as a newspaper man of over thirty years' standing.

The Buffalo Railroad Freight Committee has been in session here this week. The rate on coal has been advanced to a basis of $2.50 per gross ton hence to Chicago. This is an increase of 50 cents. The rate to Detroit, Mich., will be $1.30 per gross ton, an advance of 25 cents. The new schedule goes into effect next Tuesday. Some shippers of coal express the opinion "that the advance is uncalled for and unwarranted," and they will do their best to resist it "by shipping all the coal possible under the present rate before next week, and then holding shipments until the railroads yield to the demand for reduced rates."

Here is an item that may interest your readers: "At a meeting of the Lehigh Coal Company, at Superior City, L. S., it was decided to go ahead and finish the dock at West Superior according to the original plans. When finished, the dock will be 2000 feet long, of a capacity for 300,000 tons of coal. The cost will be about $200,000, without any machinery or superstructure, which will cost together about $60,000."

Patrick Burns, coal dealer at Toronto, has failed. His liabilities are $400,000. Arthur Lepper and Richard Trotter indorsed Burns's paper to the extent of $285,000, and the losses they will sustain by Burns's failure cripple them almost beyond recovery. The failure is a bad one, as far as can be ascertained, and the assets will be but a small proportion of the liabilities.

*P. S.*—Feb. 10.—Cleveland reports contracts for 200,000 tons of coal to head of Lake Superior, also 1,000,000 tons ore from mines. Rates coal, 75c. to 82½c. a ton, principally at outside figures. On ore, Ashland to Cleveland, $1.70 per ton to 23d August; asking $2 for season contracts. Escanaba to Cleveland, $1.40, now nominally $1.30. Marquette to Cleveland, about $1.60.

**Boston.** Feb. 9.

[From our Special Correspondent.]

The market here is in better shape, although it is not certain that all danger of a strike here is over. Coal dealers are not apprehensive of trouble. There have been several arrivals here from New York, and more are on the way. The trouble with the Philadelphia & Reading is expected to be all over in a few days. The company's agent here has not been able to guarantee deliveries of late. The f.o.b. prices of the Philadelphia & Reading have remained nominally unchanged at full circular prices, just as they have in case of New York companies. No disposition has been shown to crowd up prices. Where the public has been charged high rates, it has been by small retailers. Thus far, the poor people depending upon peddler trade are the only ones in Boston that have suffered from the strike.

There was some talk of bringing coal all rail, but we hear of no arrivals in that way. It would cost over $6 say for Stove, and the stringency has not been severe enough yet. The general belief is, that the trouble will be speedily ended. Agents tell their customers that the want of trimmers is the only serious obstacle to dispatching orders promptly. Thus, barges which require no trimming are loaded first, and sailing vessels have to wait. The ports on Long Island Sound to which barges run are getting relief, which they needed very much. A doleful minority is afraid of more and greater labor disturbance, but it does not look that way.

There is some talk as to what the opening f.o.b. price for bituminous coal will be on March 1st, and no one predicts less than $2.50. As heretofore, there is an apparently strong front against selling at any delivered price.

A scarcity of vessels keeps up freights to a good figure. We quote, exclusive of discharging: New York, $1.50; Philadelphia, $2; Baltimore, $1.90@$2; Newport News and Norfolk, $1.60@$1.75.

There is a fair trade among retailers, who are getting $6 for Broken, $6.25 for Egg, and $6.50 for Stove, delivered. For Franklin, $8.50 is obtained. The supply at the lowest is estimated to hold out for about a month.

**Pittsburg.** Feb. 10.

[From our Special Correspondent.]

The coal market has been somewhat unsettled, owing to the misunderstanding between the coal operators and the diggers. As that matter seems to have been partially adjusted, the announcement is made that mining will begin at once on the basis of 2¾c. in pools Nos. 2 and 3, and 2¼c. in the fourth pool. Current rates for coal afloat, 4¾@5c.; Third Pool, 3·80@4c.; Fourth Pool, 3½@3⅝c.; Railroad, 4½@5c.

*Connellsville Coke.*—Prices of the various descriptions of coke have advanced, the rise taking effect at once. The supply of cars is increasing; still it falls short of the requirements of the trade. The advance noted in our last has been maintained. Freights were also advanced (10 per cent). Rates on blast-furnace from the mines to Pittsburg, 88 cents a ton; to Mahanoy and Shenango Valley and Wheeling, $1.35; and to Chicago, $3.30—rates adopted by all the railroads. New rates: Blast-Furnace, $2, f.o.b. cars at ovens; Foundry, $2.30; Crushed, $2.60.

## FINANCIAL.

### Mining Stocks.

NEW YORK, Friday Evening, Feb. 11.

The mining market attracts but little attention, and for the present there seems to be no prospect of an early revival of business in this quarter. A number of new mining companies have recently been listed, and the transactions in the "new-comers" have shown the most activity. Prices on the whole show but little variation.

Amador and Little Bar have been among the most active stocks on the list, especially the latter, of which over 12,000 shares changed hands, at prices varying from 55@62c. The former stock opened at $1.35, but toward the close of the week declined to $1.20. Stanislaus was quiet, advancing from $1.05@1.95. Quicksilver Preferred showed a few sales at $31 and $30.50; and Common, at $6.75 and $7. Plymouth Consolidated remains at $17. Some business was done in Taylor-Plumas at from 10@8c. The Bodie stocks were almost entirely neglected. Bodie Consolidated showed a few sales in the beginning of the week at $2.05 and $2.10; Mono, at $2.40; and Consolidated Pacific, at 30c.

El Cristo is again on the upward move. It advanced from $2.35@$2.65, closing at $2.55. The experts have returned, but nothing is given out as to the tenor of their reports. If we are to judge by the very moderate advance in the stocks, they must be quite disappointing to those who have recently been giving out points at $25.

Rappahannock has displayed some activity at 15 and 17c.

One sale of 100 shares of Moulton is recorded at $1.70.

New Germany has ranged between 46 and 51c.

Castle Creek is quiet at 11 and 12c.

Consolidated California & Virginia has declared a dividend of fifty cents a share; but this announcement brought little activity to the stock, which shows but a few sales at declining prices, from $22.87@$21.13. Ophir, which last week advanced from $11.75@$14.13, declined this week to $12.50. Best & Belcher was also lower at from $10.87@$9.50. Mexican, from $7.75@$7.25. Sierra Nevada, at from $6@$5.75. Savage sold at $6.38; and Union Consolidated at $5.25. Julia, at $1. Sutro Tunnel displayed its usual activity, and was firm at from 23@20c. Eureka held its own at $6.50. North Belle Isle showed a declining movement, going from $5.25@$4.70. Navajo ranged between 95c. and $1. Belle Isle, from 49@40c. The "cats," State Line 1 & 4 and 2 & 3, were jumping about at 3 and 4c. Oriental & Miller was quiet at 16 and 18c.

The stock of the Security Mining and Milling Company, which is dealt in among the unlisted securities at the New York Stock Exchange, at from $5@$6, was listed on the 10th inst. on the Petroleum Stock and Mining Exchange. The capital stock of the company is $10,000,000 in shares of $10 each. The property is situated at Rosita, Colo., and, thus far, but little information concerning its value has been made public. We shall be pleased to hear from our readers who are acquainted with the property concerning these mines. Among the other Colorado stocks, quite a boom was worked up in Silver Cliff, which shows sales of some 29,800 shares. The price opened at 20c., but declined to 5c. on Wednesday, and later advanced again to 17c., closing at 15c. Little Chief went from 26@31c. Chrysolite sold at 58c. Lacrosse was firm at 12c. Red Elephant ruled at 5@6c.

But little interest was manifested in Homestake at $13.50; in Deadwood-Terra, at from $2.25@$2.40; and Caledonia, at $1.25. Iron Hill declined from $1.75@$1.40.

Ontario stood firm at $25. Horn-Silver advanced from $1.50@$1.65. Stormont shows a sale at 16c.

Phœnix was on a downward move, going from $9.37½@$5.50. On our editorial page, will be found further reference to this company.

### Coal Stocks.

During the past week, the prominent bulls have taken hold of the market, and have been able to raise prices all around, while at the same time they have created quite a bullish feeling, whereas last week the inclination was to take a very gloomy view of things. The developments outside of a weakening of the strikes have not been particularly encouraging.

The war scares have not been so marked abroad this week as they were last week, still there has been an unsettled feeling there. The Interstate Commerce Bill is a fact, and is not likely to be an influence one way or another until put into practical operation. The market is under strong manipulation, and stocks are not bought on merits, but on points that they are to go higher.

The bareness of the coal markets, and a belief that the coal trade will be very good when the strikes are entirely out of the way, are giving more confidence to the holders of the anthracite coal stocks. The deposits of securities under the Morgan-Welsh plan for the reorganization of Reading is creating a better feeling toward that stock. The gossip says that Jersey Central is to go higher because the Corbin party has control.

New Central Coal declared a dividend of 1 per cent yesterday, which caused that stock to advance some. At the close of the market, a liberal realizing movement set in, and prices declined all around. It is said that the bear party that caused the big break in prices in December is again beginning operations, having been quiet since that time.

### Meetings.

The annual and special meetings of the following companies will be held at the times mentioned:

Agogebic Iron and Pine Land Company, Germania Hall, Hancock, Mich., March 1st, at two o'clock P.M., special meeting to authorize by a vote of the stockholders a sale and conveyance of all of the real estate or any part of the real estate of the company.

Bonanza Development Company, Clarendon Hotel, Leadville, Colo., March 9th.

Consolidation Coal Company, No. 19 German street, Baltimore, Md., February 16th, at twelve o'clock M.

Cusihuiriachic Mining Company, New York City, February 24th.

Iron Silver Mining Company, No. 23 Broad street, New York City, March 2d, at twelve o'clock M.

Lehigh Coal and Navigation Company, Room of the Board of Trade, Mercantile Library Building, Tenth street, Philadelphia, Pa., February 21st, at eleven o'clock A.M.

Lehigh & Wilkes-Barre Coal Company, No. 226 South Third street, Philadelphia, Pa., February 24th, at twelve o'clock M. At this meeting, the stockholders will be asked to vote for or against an increase of indebtedness of said company, by an issue of bonds, not exceeding $2,500,000, the proceeds to be used in retiring other bonds and mortgages matured and becoming due.

Robinson Consolidated Mining Company, No. 80 Beaver street, New York City, March 1st, at twelve o'clock M.

Sweetwater Mining Company, at No. 32 Lafayette Place, New York City, February 12th, at twelve o'clock M.

Windsor Consolidated Mining Company, No. 15 State street, New York City, February 28th, at twelve o'clock M., special meeting for the purpose of determining whether the operations of the company shall be resumed or its property shall be sold or otherwise disposed of, and to adopt such other measures in re

## DIVIDEND-PAYING MINES.

| | Name and Location of Company. | | Capital Stock. | Shares. No. | Shares. Par value | Assessments. Total levied to date. | Assessments. Date and amount per share of last. | | | Dividends. Total paid to date. | Dividends. Date and amount per share of last. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Adams, s L | Colo. | $1,500,000 | 150,000 | $10 | * | | | | $555,000 | Jan. 1887 | | .15 |
| 2 | Alice, s.c | Mont | 10,000,000 | 400,000 | 25 | * | | | | 750,000 | Sept | 1886 | .06¼ |
| 3 | Amie Con., s. L | Colo. | 5,000,000 | 500,000 | 10 | * | | | | 320,000 | Oct. | 1883 | .05 |
| 4 | Amy & Silversmith, s. | Mon. | | 341,419 | | | | | | 264,852 | Dec. | 1886 | .10 |
| 5 | Atlantic, c | Mich | 1,000,000 | 40,000 | 25 | $280,000 | Apl. | 1875 | $1.00 | 360,000 | Jan. | 1887 | $1.00 |
| 6 | Argenta, s | Nev.. | 10,000,000 | 100,000 | 100 | 295,000 | July | 1885 | .10 | 40,000 | Feb. | 1886 | .20 |
| 7 | Aurora, L | Mich. | 1,000,000 | 40,000 | 25 | | | | | 80,000 | Apl. | 1887 | 1.00 |
| 8 | Barbee & Walker, s.. | Utah | 1,000,000 | 100,000 | 10 | * | | | | 60,000 | Nov | 1880 | .10 |
| 9 | Bassick, G. s | Colo. | 10,000,000 | 100,000 | 100 | * | | | | 400,000 | Mar. | 1884 | 1.00 |
| 10 | Belle Isle, s | Nev.. | 10,000,000 | 100,000 | 100 | 140,000 | May | 1886 | .10 | 300,000 | Dec. | 1879 | .25 |
| 11 | Belcher, G. s | Nev.. | 10,400,000 | 104,000 | 100 | 2,217,335 | Dec. | 1885 | .30 | 15,397,000 | Apl. | 1876 | 1.00 |
| 12 | Belevue Idaho, s. L | Idah. | 1,250,000 | 125,000 | 10 | 26,250 | Dec. | 1883 | .10 | 200,000 | Jan | 1887 | .10 |
| 13 | Big B'nd Hydraulic, G | Dak.. | 1,000,000 | 200,000 | 5 | * | | | | 216,000 | Jan. | 1887 | .03 |
| 14 | Black Bear, G | Cal.. | 3,000,000 | 30,000 | 100 | 22,500 | Dec. | 1884 | .25 | 885,000 | May | 1883 | .20 |
| 15 | Bodie Con., G. s | Cal.. | 10,000,000 | 100,000 | 100 | 374,990 | Jan. | 1887 | .50 | 1,602,572 | Apl. | 1885 | .50 |
| 16 | Bonanza Developm't | C & M | 3,000,000 | 600,000 | 10 | | | | | 135,000 | Oct. | 1882 | .15 |
| 17 | Bonanza K'g, Cons. s. | Cal.. | 1,000,000 | 100,000 | 10 | * | | | | 185,000 | Feb. | 1880 | .10 |
| 18 | Boston & Mont, G | Mont | 2,500,000 | 250,000 | 10 | * | | | | 520,000 | Jun | 1886 | .15 |
| 19 | Breece, s | Colo. | 5,000,000 | 200,000 | 25 | * | | | | 2,000 | Feb. | 1880 | .01 |
| 20 | Brooklyn Lead, L. s | Utah | 500,000 | 50,000 | 10 | | | | | 102,000 | Sept | 1886 | .05 |
| 21 | Bulw'r, G | Cal | 1,000,000 | 100,000 | 100 | 43,000 | Oct. | 1885 | .20 | 175,000 | Jan. | 1884 | .10 |
| 22 | Caledonia, G | Dak. | 10,000,000 | 100,000 | 100 | 505,000 | May | 1885 | .15 | 40,000 | Feb. | 1886 | .10 |
| 23 | Calumet & Hecla, C | Mich | 2,500,000 | 100,000 | 25 | 1,200,000 | | | | 28,350,000 | Nov. | 1886 | 5.00 |
| 24 | Carbonate Hill, s. L | Colo. | 2,000,000 | 200,000 | 10 | * | | | | 80,000 | Apl. | 1884 | .05 |
| 25 | Caribou Con., s | Colo. | 1,500,000 | 150,000 | 10 | * | | | | 50,000 | Mch | 1880 | .10 |
| 26 | Castle Creek, G | Idah. | 100,000 | 100,000 | 1 | | | | | 51,000 | Oct. | 1883 | .03 |
| 27 | Cataipa, s. L | Colo. | 3,000,000 | 300,000 | 10 | * | | | | 270,000 | May | 1884 | .10 |
| 28 | Central, C | Mich | 500,000 | 20,000 | 25 | 100,000 | Sept | 1861 | .06 | 1,820,000 | Feb | 1887 | 2.00 |
| 29 | Christy, s | Utah | 10,000,000 | 100,000 | 100 | | | | | 10,000 | Jun. | 1885 | .10 |
| 30 | Chrysolite, s. L | Colo. | 10,000,000 | 200,000 | 50 | * | | | | 1,660,000 | Dec. | 1884 | .25 |
| 31 | Colorado Central, s. L | Colo. | 2,750,000 | 275,000 | 10 | * | | | | 185,000 | Feb. | 1887 | .05 |
| 32 | Cons. Cal. & Va., G. s. | Nev.. | 21,666,000 | 216,600 | 100 | 108,000 | Jan. | 1885 | .20 | 280,800 | Feb | 1887 | .50 |
| 33 | Con. Gold Mining, G | Ga.. | 500,000 | 100,000 | 5 | * | | | | 108,000 | Nov. | 1883 | .02 |
| 34 | Contention, s | Ariz. | 12,500,000 | 250,000 | 50 | | | | | 2,587,000 | Dec. | 1884 | .25 |
| 35 | Crescent, s. L. G | Utah | 15,000,000 | 600,000 | 25 | * | | | | 210,000 | Aug. | 1886 | .05 |
| 36 | Crown Point, G. s | Nev. | 10,000,000 | 100,000 | 100 | 2,675,000 | Feb. | 1882 | .25 | 11,588,000 | Jan. | 1875 | 2.00 |
| 37 | Daly, s. L | Utah | | 150,000 | | | | | | 75,000 | Feb. | 1887 | .50 |
| 38 | Deadwood-Terra, G | Dak.. | 5,000,000 | 200,000 | 25 | * | | | | $900,000 | Jan. | 1883 | .10 |
| 39 | Derbec B. Grav., G. s. | Cal.. | 10,000,000 | 10,000 | 100 | 90,000 | Dec. | 1881 | .10 | 140,000 | Jun. | 1886 | .10 |
| 40 | Dunkin, s. L | Colo. | 5,000,000 | 200,000 | 25 | * | | | | 220,000 | Sept | 1884 | .05 |
| 41 | Elkhorn, G. s | Mont | 1,000,000 | 100,000 | 10 | 50,000 | July | 1883 | .50 | 155,000 | Jan | 1887 | .05 |
| 42 | Eureka Con., G. s. L | Nev.. | 5,000,000 | 50,000 | 100 | 500,000 | July | 1886 | 1.00 | 4,317,500 | July | 1882 | .25 |
| 43 | Evening Star, s. L | Colo. | 500,000 | 30,000 | 10 | * | | | | 1,400,000 | Nov | 1883 | .50 |
| 44 | Excelsior, G | Cal.. | 10,000,000 | 100,000 | 100 | 560,000 | Sept | 1885 | 1.00 | 875,000 | Oct. | 1880 | .25 |
| 45 | Father de Smet, G | Dak.. | 10,000,000 | 100,000 | 100 | 200,000 | Nov. | 1878 | 1.00 | 1,125,000 | Dec. | 1886 | .20 |
| 46 | Franklin, C | Mich | 1,000,000 | 40,000 | 25 | 220,000 | Jun. | 1871 | | 560,000 | Dec. | 1886 | 1.00 |
| 47 | Freeland, G. s. C | Colo. | 5,000,000 | 200,000 | 25 | * | | | | 190,000 | July | 1886 | .10 |
| 48 | Fresno Enterprise, G | Cal.. | 5,000,000 | 100,000 | 50 | | | Mch | 1883 | 110,000 | July | 1882 | .10 |
| 49 | Garfield Lt., G. s | Nev. | 500,000 | 100,000 | 5 | | | | | 12,000 | Dec. | 1883 | .12 |
| 50 | Gould & Curry, G. s. | Nev.. | 10,300,000 | 103,000 | 100 | 4,065,000 | Sept | 1886 | .50 | 3,826,000 | Oct. | 1870 | 10.00 |
| 51 | Grand Central, s | Ariz. | 1,000,000 | 100,000 | 10 | | | | | 625,000 | Dec. | 1882 | .25 |
| 52 | Grand Prize, s | Nev.. | 10,000,000 | 100,000 | 100 | 570,000 | Apl. | 1886 | .50 | 495,000 | Mar. | 1884 | .25 |
| 53 | Granite, s | Colo. | 125,000 | 125,000 | 1 | | | | | 6,250 | May | 1883 | .01 |
| 54 | Granite Mountain, s | Mont | 10,000,000 | 400,000 | 25 | | | | | 1,800,000 | Jan. | 1887 | .25 |
| 55 | Green Mountain, G | Cal.. | 1,250,000 | 125,000 | 10 | * | | | | 212,000 | Nov. | 1881 | .07½ |
| 56 | Hale & Norcross, G. s | Nev.. | 11,200,000 | 112,000 | 100 | 4,971,800 | Oct. | 1886 | .40 | 1,598,000 | Apl. | 1871 | 5.00 |
| 57 | Hall-Anderson, G | N. s. | 150,000 | 150,000 | 1 | | | | | 7,000 | Jan. | 1882 | .05 |
| 58 | Hecla Con., s. G. L. C | Mont | 1,500,000 | 30,000 | 50 | | | | | 1,122,000 | Jan. | 1887 | .50 |
| 59 | Hel'a Mg & Red, G. s. L | Mont | 3,315,906 | 663,000 | 5 | * | | | | 197,970 | July | 1886 | .06 |
| 60 | Holmes, s | Nev.. | 10,000,000 | 100,000 | 100 | 300,000 | Sept | 1885 | 10 | 75,000 | Apl. | 1886 | .25 |
| 61 | Holyoke, G | Idah. | 200,000 | 200,000 | 1 | | | | | 27,000 | Feb. | 1883 | .10 |
| 62 | Homestake, G | Dak. | 12,500,000 | 125,000 | 100 | 200,000 | July | 1878 | 1.00 | 3,718,750 | Jan. | 1887 | .20 |
| 63 | Honorine, s. L | Utah | 500,000 | 250,000 | 2 | 25,000 | Jun. | 1883 | | 87,500 | Dec. | 1886 | .05 |
| 64 | Hope, s | Mont | 400,000 | 8,000 | 50 | * | | | | 158,252 | Oct. | 1884 | 1.50 |
| 65 | Horn-Silver, s. L | Utah | 10,000,000 | 400,000 | 25 | * | | | | 4,000,000 | Nov. | 1884 | .50 |
| 66 | Idaho, G | Cal.. | 310,000 | 3,100 | 100 | | | | | 3,750,000 | Jun. | 1886 | 7.50 |
| 67 | Ideal, s. L | Colo. | 1,500,000 | 150,000 | 10 | | | | | 15,000 | Oct. | 1886 | .05 |
| 68 | Illinois, s | N.M. | 100,000 | 100,000 | 1 | * | | | | 25,000 | Jan. | 1887 | .25 |
| 69 | Independence, s | Nev.. | 10,000,000 | 100,000 | 100 | 340,000 | Oct. | 1886 | .20 | 225,000 | Sept | 1879 | .25 |
| 70 | Indian Queen, s | Nev.. | 250,000 | 125,000 | 2 | | | | | 368,750 | July | 1883 | .03 |
| 71 | Invo, G | Cal.. | 500,000 | 100,000 | 5 | * | | | | 45,000 | Apl. | 1882 | .05 |
| 72 | Iron Hill, s | Dak. | 2,500,000 | 250,000 | 10 | 82,500 | Oct. | 1885 | | 112,500 | Oct. | 1886 | .05 |
| 73 | Iron-Silver, s. L | Colo. | 10,000,000 | 500,000 | 50 | * | | | | 1,800,000 | Dec. | 1886 | .20 |
| 74 | Jackson, G. s | Nev. | 5,000,000 | 50,000 | 100 | 10,000 | Nov. | 1880 | .20 | 45,000 | Oct. | 1886 | .10 |
| 75 | Jocuistita, s | Mex. | 2,500,000 | 250,000 | 10 | | | | | 1,200,000 | Feb. | 1885 | .50 |
| 76 | Kentuck | Nev.. | 3,000,000 | 30,000 | 100 | 342,000 | Nov | 1881 | .30 | 1,600,000 | Dec. | 1886 | .10 |
| 77 | La Plata, s. L | Colo | 2,000,000 | 200,000 | 10 | * | | | | 610,000 | Sept | 1886 | .30 |
| 78 | Leadville Cons., s. L. L | Colo. | 4,000,000 | 400,000 | 10 | * | | | | 410,000 | Oct. | 1886 | .05 |
| 79 | Lexington, G. s | Mont | 4,000,000 | 40,000 | 100 | * | | | | 565,000 | Jan. | 1885 | 2.00 |
| 80 | Little Chief, s. L | Colo. | 10,000,000 | 200,000 | 50 | * | | | | 780,000 | Mch | 1883 | .10 |
| 81 | Little Pittsburg, s. L | Colo. | 20,000,000 | 200,000 | 100 | * | | | | 1,050,000 | Mch. | 1880 | .50 |
| 82 | Manhattan, s | Nev. | 5,000,000 | 50,000 | 100 | 150,000 | July | 1870 | 1.00 | 487,500 | Feb | 1887 | 1.00 |
| 83 | Marguerite, G | Cal.. | 500,000 | 25,000 | 20 | | | | | 18,750 | Oct. | 1882 | .25 |
| 84 | Marion Bullion, G | N.C. | 500,000 | | | | | | | 15,000 | Jan. | 1886 | |
| 85 | Martin White, s | Nev.. | 10,000,000 | 100,000 | 100 | 1,150,000 | Mar. | 1886 | 25 | 140,000 | Dec. | 1886 | .25 |
| 86 | Minnesota, C | Mich | 1,000,000 | 40,000 | 25 | 420,000 | Apl. | 1886 | 1 00 | 1,826,000 | Mar. | 1876 | |
| 87 | Mono, G | Colo. | 5,000,000 | 50,000 | 100 | 360,000 | Jun. | 1885 | .50 | 12,500 | Mar | 1886 | .25 |
| 88 | Montana, Lt., G. s | Mont | 3,300,000 | 330,000 | 10 | * | | | | 999,930 | Jan. | 1887 | .62 |
| 89 | Morning Star, s. L | Colo. | 1,000,000 | 100,000 | 10 | * | | | | 675,000 | Dec. | 1886 | .25 |
| 90 | Moulton, s. G | Mont | 2,000,000 | 400,000 | 5 | * | | | | 320,000 | Dec | 1886 | .07½ |
| 91 | Mount Pleasant, G | Cal. | 150,000 | 150,000 | 1 | * | | | | 105,000 | Mar. | 1884 | .10 |
| 92 | Mt. Diablo, s | Nev. | 5,000,000 | 50,000 | 100 | 137,500 | Jun. | 1880 | 2.00 | 80,000 | July | 1885 | .20 |
| 93 | Napa, G | Cal.. | 700,000 | 100,000 | 7 | | | | | 290,000 | Jan. | 1883 | .10 |
| 94 | Navalo, G. s | Nev.. | 10,000,000 | 100,000 | 100 | 420,000 | Jan. | 1887 | 25 | 325,000 | Feb. | 1885 | .25 |
| 95 | N. Hoover Hill, G. s. | N. C. | 250,000 | 250,000 | 2½ | * | | | | 30,000 | Dec. | 1885 | .06½ |
| 96 | New York Hill, G | Cal.. | 5,000,000 | 50,000 | 100 | 62,500 | Oct. | 1885 | .15 | 215,000 | Aug. | 1882 | .10 |
| 97 | Northern Belle, s | Nev.. | 5,000,000 | 50,000 | 100 | 425,000 | Jan. | 1884 | 8.30 | 2,400,000 | Apl. | 1883 | .50 |
| 98 | North Belle Isle, s | Nev.. | 10,000,000 | 100,000 | 100 | 200,000 | Jan. | 1887 | .50 | 30,000 | Aug. | 1881 | .15 |
| 99 | Ontario, s. L | Utah | 15,000,000 | 150,000 | 100 | | | | | 8,000,000 | Jan. | 1887 | .50 |
| 100 | Ophir, G. s | Nev.. | 10,000,000 | 100,000 | 100 | 4,007,800 | Dec. | 1886 | .50 | 1,595,000 | July | 1882 | 1.00 |
| 101 | Original, s. C | Mont | 1,500,000 | 60,000 | 25 | * | | | | 114,000 | Oct. | 1884 | .05 |
| 102 | Osceola, C | Mich | 1,250,000 | 50,000 | 25 | 480,000 | Apl. | 1876 | 1.60 | 1,022,500 | Jan. | 1887 | 1 00 |
| 103 | Oxford, G | N. S. | 125,000 | 125,000 | 1 | * | | | | 38,500 | Oct. | 1885 | .02 |
| 104 | Paradise Valley, G. s | Nev. | 10,000,000 | 100,000 | 100 | 47,000 | Mar. | 1882 | .15 | 140,000 | Nov. | 1886 | .10 |
| 105 | Peacock, s. G. C | N.M. | 2,000,000 | 200,000 | 10 | * | | | | 60,000 | Nov. | 1886 | |
| 106 | Pleasant Valley, G. s. | Cal.. | 10,000,000 | 100,000 | 100 | 40,000 | Mar. | 1884 | .10 | 30,000 | Dec. | 1882 | .05 |
| 107 | Plutus, G. s. C. L | Colo. | 2,000,000 | 200,000 | 10 | * | | | | 20,000 | Feb. | 1886 | .10 |
| 108 | Plymouth Con., G | Cal.. | 5,000,000 | 100,000 | 50 | * | | | | 1,875,000 | Feb. | 1887 | .25 |
| 109 | Prussian, s. L | Colo | 1,500,000 | 150,000 | 10 | | | | | 132,000 | Jan | 1883 | .10 |
| 110 | Quicksilver, pref., Q | Cal.. | 4,300,000 | 43,000 | 100 | | | | | 843,650 | Jan. | 1887 | 1.50 |
| 111 | " com., Q | Cal | 5,700,000 | 57,000 | 100 | | | | | 151,000 | July | 1882 | .40 |
| 112 | Quincy, C | Mich | 1,000,000 | 40,000 | 25 | 200,000 | Dec. | 1862 | | 4,570,000 | Jan. | 1887 | 4.00 |
| 113 | Richmond, s. L | Nev.. | 1,350,000 | 54,000 | 25 | * | | | | 4,215,087 | Dec. | 1886 | 1.25 |
| 114 | Ridge, C | Mich. | 500,000 | 20,000 | 25 | 220,000 | Mar | 1886 | .50 | 10,000 | Feb. | 1880 | .50 |
| 115 | Rising Sun, s | Dak.. | 5,500,000 | 150,000 | 5 | * | | | | 52,000 | May | 1881 | .07½ |
| 116 | Robinson Con., s. L | Colo. | 10,000,000 | 200,000 | 50 | * | | | | 585,000 | Mar. | 1886 | .05 |
| 117 | Robert E. Lee, s. L | Colo | 10,000,000 | 500,000 | 20 | | | | | 100,000 | Dec. | 1882 | .10 |
| 118 | Rooks, G | Vt.. | 500,000 | 50,000 | 10 | * | | | | 61,000 | Apr. | 1885 | .30 |
| 119 | San Francisco, C | Cal.. | 5,000,000 | 50,000 | 100 | 45,000 | Sept | 1883 | .50 | 20,000 | Feb. | 1884 | .05 |
| 120 | Savage, s | Nev.. | 11,200,000 | 112,000 | 100 | 6,156,000 | Jun. | 1886 | .50 | 4,460,000 | July | 1869 | 3.00 |
| 121 | Security L. Mg., Mfg. | Colo. | 1,000,000 | 100,000 | 10 | * | | | | 50,000 | July | 1884 | |
| 122 | Shoshone, G | Idah. | 150,000 | 150,000 | 1 | | | | | 7,500 | Apl. | 1883 | .01 |
| 123 | Sierra Buttes, G | Cal.. | 225,000 | 22,500 | 10 | | | | | 1,438,964 | Oct. | 1886 | .37 |
| 124 | Sierra Grande, s | N. M. | 2,500,000 | 500,000 | 5 | | | | | 860,000 | Sept | 1884 | .25 |
| 125 | Sierra Nevada, G. s. | Nev.. | 10,000,000 | 100,000 | 100 | 5,907,698 | Jan. | 1887 | .25 | 102,000 | Jan. | 1871 | 1.00 |
| 126 | Silver Cord, G. s. L | Colo. | 5,000,000 | 500,000 | 10 | | | | | 225,000 | Nov. | 1883 | .25 |
| 127 | Silver King, s | Ariz. | 10,000,000 | 100,000 | 100 | | | | | 1,825,000 | | 1887 | .25 |
| 128 | Silverton, G. s. L | Colo. | 2,000,000 | 200,000 | 10 | * | | | | 75,000 | Nov | 1886 | .02 |
| 129 | Small Hopes Cons., s | Colo. | 5,000,000 | 250,000 | 20 | * | | | | 2,562,500 | Jan. | 1887 | .20 |
| 130 | Smuggler, s. L | Colo. | 600,000 | 60,000 | 10 | | | | | 66,700 | Aug. | 1883 | .25 |
| 131 | Socorro, C | N. M. | 250,000 | 2,500 | 100 | | | | | 4,000 | Mch | 1882 | .00¼ |
| 132 | South Yuba, G | Cal.. | 2,000,000 | 80,000 | 50 | * | | | | 150,000 | Oct. | 1881 | .75 |
| 133 | Spring Valley, G | Cal.. | 200,000 | 200,000 | 1 | 50,000 | Oct. | 1886 | .25 | 50,000 | Jan. | 1881 | .25 |
| 134 | Standard, G. s | Cal.. | 10,000,000 | 100,000 | 100 | 25,000 | Oct. | 1884 | .25 | 4,425,000 | Mar. | 1884 | .25 |
| 135 | Stormont, s | Utah | 500,000 | 500,000 | 1 | * | | | | 155,000 | Nov. | 1881 | .05 |
| 136 | St. Joseph, L | Mo.. | 1,500,000 | 150,000 | 10 | * | | | | 724,000 | Dec. | 1886 | .20 |
| 137 | Syndicate, G | Cal. | 10,000,000 | 100,000 | 100 | 38,729 | July | 1882 | .15 | 48,308 | Sept | 1882 | .10 |
| 138 | Tip Top, s | Ariz. | 10,000,000 | 100,000 | 100 | 250,000 | Sept | 1883 | .25 | 100,000 | Nov. | 1881 | .20 |
| 139 | Tombstone, G. s. L | Ariz | 12,500,000 | 500,000 | 25 | * | | | | 1,250,000 | Apl. | 1882 | .10 |
| 140 | True Fissure, G. s. L | Utah | 1,000,000 | 150,000 | 10 | * | | | | 75,000 | Jun. | 1883 | .15 |
| 141 | United Verde, C | Ariz. | 3,000,000 | 300,000 | 10 | * | | | | 97,500 | Feb. | 1884 | .20 |
| 142 | Valecia, M | N. M. | 150,000 | 1,500 | 100 | * | | | | 37,500 | Apl | 1886 | 2.50 |
| 143 | Vista Lt., s. L | Idah. | 750,000 | 150,000 | 5 | * | | | | 55,750 | Feb. | 1887 | .12½ |
| 144 | Vizina, s | | 5,000,000 | 200,000 | 25 | * | | | | 140,000 | Apl. | 1882 | .10 |
| 145 | Yankee Girl | | 2,500,000 | 250,000 | 10 | | | | | 1,075,000 | Jan. | 1887 | .05 |
| 146 | Yellow Jacket, G. s. | | 12,000,000 | 120,000 | 100 | 5,448,000 | Dec. | 1885 | .75 | 2,184,000 | Aug. | 1871 | 1.50 |
| 147 | | | | | | | | | | | | | |

## NON-DIVIDEND-PAYING MINES.

| | Name and Location of Company. | | Capital Stock. | Shares. No. | Shares. Par Value | Assessments. Total levied to date. | Assessments. Date and amount per share of last | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Agassiz Cons., s. L | Colo. | $2,500,000 | 50,000 | $50 | * | | | |
| 2 | Albion, s. L | Nev.. | 15,000,000 | 150,000 | 100 | $577,000 | July | 1883 | .50 |
| 3 | Allouez, C | Mich | 2,000,000 | 80,000 | 25 | 240,000 | Feb. | 1884 | .50 |
| 4 | Alpha Con., G. s. | Nev.. | 3,000,000 | 30,000 | 100 | 445,000 | Jan. | 1887 | .50 |
| 5 | Alta, s | Nev.. | 10,080,000 | 100,800 | 100 | 2,027,000 | Feb. | 1887 | .50 |
| 6 | Amador, G | Cal.. | 400,000 | 200,000 | 2 | * | | | |
| 7 | American Flag, s | Colo. | 1,250,000 | 125,000 | 10 | 300,000 | Jun. | 1877 | .25 |
| 8 | Anglo-Montana, Lt. | Mon. | 600,000 | 120,000 | 5 | | | | |
| 9 | Appalachian, Lt., G. | N. C. | 1,500,000 | 300,000 | 5 | | | | |
| 10 | Aspen Mg. & S., s. L | Colo. | 2,000,000 | 200,000 | 10 | | | | |
| 11 | Barcelona, G | Nev.. | 5,000,000 | 200,000 | 25 | * | | | |
| 12 | Battle Creek, G | Dak. | 5,000,000 | 200,000 | 25 | | | | |
| 13 | Bear Creek | Cal.. | 300,000 | 300,000 | 1 | | | | |
| 14 | Bechtel Con., G | Cal.. | 10,000,000 | 100,000 | 100 | 173,500 | Jan. | 1883 | .10 |
| 15 | Belmont, s | Nev.. | 5,000,000 | 50,000 | 100 | 735,000 | Apl. | 1886 | .10 |
| 16 | Best & Belcher, G. s. | Nev. | 10,080,000 | 100,800 | 100 | 1,748,590 | Sept | 1886 | .50 |
| 17 | Big Pittsburg, s. L | Colo. | 20,000,000 | 200,000 | 100 | * | | | |
| 18 | Bi-Metallic, s | Mon. | 5,000,000 | 200,000 | 25 | * | | | |
| 19 | Black Jack, G | Cal.. | 250,000 | 100,000 | 2½ | | | | |
| 20 | Bonanza Chief | Mon | 1,000,000 | 1,000,000 | 1 | * | | | |
| 21 | Bondholder | Colo | 500,000 | 200,000 | 2½ | | | | |
| 22 | Boston Con., G | Cal.. | 10,000,000 | 100,000 | 100 | 170,000 | Nov | 1883 | .25 |
| 23 | Bradshaw, s | Ariz. | 2,250,000 | 225,000 | 10 | | | | |
| 24 | Brunswick, G | Cal.. | 2,000,000 | 400,000 | 5 | * | | | |
| 25 | Buckeye Common | Colo. | 2,000,000 | 400,000 | 5 | * | | | |
| 26 | Bull Domingo, s. L | Colo. | 10,000,000 | 200,000 | 50 | * | | | |
| 27 | Bullion, G. s | Nev.. | 10,000,000 | 100,000 | 100 | 5,000,000 | Jan. | 1887 | .40 |
| 28 | Bve and Bye | Ariz. | 1,000,000 | 100,000 | 10 | * | | | |
| 29 | Calaveras, G | Cal. | 500,000 | 500,000 | 1 | * | | | |
| 30 | Carisa, G | Wy | 500,000 | 100,000 | 5 | * | | | |
| 31 | Catskill, s | Nev.. | 1,500,000 | 300,000 | 5 | * | | | |
| 32 | Cen Contin'l, G. s. L | C. & A | 2,000,000 | 200,000 | 10 | * | | | |
| 33 | Charles Dickens | Idah. | 1,250,000 | 250,000 | 5 | | | | |
| 34 | Cherokee, G | Cal.. | 1,500,000 | 150,000 | 10 | | | | |
| 35 | Chollar, s | Nev.. | 11,200,000 | 112,000 | 100 | 1,096,000 | Nov | 1886 | .50 |
| 36 | Cinnamon Mt., G. s | Colo. | 750,000 | 150,000 | 5 | | | | |
| 37 | Climax, s. L | Colo. | 2,000,000 | 200,000 | 10 | * | | | |
| 38 | Colorado No. 2, s. L | Colo. | 100,000 | 10,000 | 10 | | | | |
| 39 | Con. Imperial, G. s. | Nev.. | 50,000,000 | 500,000 | 100 | 1,100,000 | Aug. | 1886 | 10 |
| 40 | Con. Pacific, G | Cal.. | 6,000 000 | 60,000 | 100 | 174,000 | Feb. | 1886 | .15 |
| 41 | Cons Silver, s | Mo.. | 2,500,000 | 250,000 | 10 | | | | |
| 42 | **Con. Queen Cons, C. | Ariz. | 1,400 000 | 140,000 | 10 | | | | |
| 43 | Courtlandt | Colo. | 500,000 | 100,000 | 10 | | | | |
| 44 | Crescent, s. L | Colo. | 3,000,000 | 300,000 | 10 | * | | | |
| 45 | Crocker, s | Ariz. | 10,000,000 | 100,000 | 100 | 65,000 | May | 1886 | .20 |
| 46 | Crowell, G | N. C | 500,000 | 500,000 | 1 | | | | |
| 47 | Dahlonega, G | Ga.. | 250,000 | 250,000 | 1 | * | | | |
| 48 | Dandy, s | Colo. | 5,000,000 | 500,000 | 10 | | | | |
| 49 | Dardanelles, G | Cal.. | 1,000,000 | 100,000 | 10 | | | | |
| 50 | Decatur, s | Colo. | 1,500,000 | 300,000 | 5 | * | | | |
| 51 | Denver City, s. L | Colo. | 5,000,000 | 500,000 | 10 | * | | | |
| 52 | Denver Gold | Colo. | 300,000 | 60,000 | 5 | | | | |
| 53 | Deseret, G | Utah | 500,000 | 50,000 | 10 | * | | | |
| 54 | Dunderberg, s | Colo. | 1,500,000 | 150,000 | 10 | * | | | |
| 55 | Durango, G | Colo. | 500,000 | 500,000 | 1 | * | | | |
| 56 | Durango T | Mex | 120,000 | 1,200 | 100 | | | | |
| 57 | Eastern Dev. Co., Lt. | N. S. | 1,500,000 | 150,000 | 10 | 990,000 | Mar. | 1886 | 1.00 |
| 58 | El Cristo, G | U.S.C | 1 000,000 | 500,000 | 2 | | | | |
| 59 | Empire Lt., G | Mon. | 500,000 | 100,000 | 5 | | | | |
| 60 | Empire, s | Utah | 10,000,000 | 100,000 | 100 | | | | |
| 61 | Enterprise, s. L | Colo. | 800,000 | 80,000 | 10 | * | | | |
| 62 | Eureka Tunnel, s. L | Nev.. | 10,000,000 | 100,000 | 100 | * | | | |
| 63 | Excheguer | Nev.. | 10,000,000 | 100,000 | 100 | 860,000 | Oct. | 1886 | .20 |
| 64 | Gold Placer, G | Colo. | 5,000,000 | 200,000 | 25 | 229,314 | Dec. | 1885 | .25 |
| 65 | Goodshaw, G | Cal.. | 10,000,000 | 100,000 | 100 | * | | | |
| 66 | Grand Belt, C | Tex. | 12,000,000 | 120,000 | 100 | | | | |
| 67 | Grand Duke | Colo. | 800,000 | 80,000 | 10 | | | | |
| 68 | Gregory-Bobtail, G | Colo. | 550,000 | 550,000 | 1 | * | | | |
| 69 | Gregory Con., G | Mon. | 3,000,000 | 300,000 | 10 | | | | |
| 70 | Harlem M. & M. Co, G | Cal.. | 1,000,000 | 200,000 | 5 | | | | |
| 71 | Head Cent. & Tr. s. G | Ariz. | 10,000,000 | 100,000 | 100 | | | | |
| 72 | Hidalgo, s | Mex. | 200,000 | 20,000 | 10 | | | | |
| 73 | Highland, C | Mich | 500,000 | 25,000 | 25 | | | | |
| 74 | Hortense, s | Colo. | 2,000,000 | 200,000 | 10 | | | | |
| 75 | Iron Gold & Silver, s | N. M. | 2,000,000 | 200,000 | 10 | | | | |
| 76 | Iroquois, C | Mich | 1,250,000 | 50,000 | 25 | | | | |
| 77 | J. D. Reymert | Ariz | 10,000,000 | 100,000 | 100 | * | | | |
| 78 | Julia Cons., G. s | Nev. | 11,000,000 | 110,000 | 100 | 1,438,000 | Nov | 1885 | .10 |
| 79 | Kearsarge, C | Mich | 1 250,000 | 50,000 | 25 | 100,000 | Apl. | 1886 | 5.00 |
| 80 | Ladede | N. M. | 2,000,000 | 200,000 | 10 | | | | |
| 81 | Lacrosse, G | Colo. | 1,000,000 | 100,000 | 10 | * | | | |
| 82 | Lee Basin, s. L | Colo. | 5,000,000 | 500,000 | 10 | * | | | |
| 83 | Leviathan, s | Nev.. | 10,000,000 | 100,000 | 100 | 380,000 | Sept | 1882 | .25 |
| 84 | Lucerne, s | Colo. | 5,000,000 | 500,000 | 10 | * | Jan. | 1885 | .10 |
| 85 | Mammoth Bar, G | Cal.. | 10,000,000 | 100,000 | 100 | 50,000 | Dec. | 1881 | |
| 86 | Mariposa pref., G | Cal.. | 5,000,000 | 50,000 | 100 | 1,687,500 | Feb. | 1883 | .25 |
| 87 | " common, G | Cal.. | 10,000,000 | 100,000 | 100 | 1,975,000 | Dec | 1881 | .20 |
| 88 | May Belle, G | Cal.. | 10,000,000 | 100,000 | 100 | 84,000 | Mar. | 1884 | .15 |
| 89 | Mayflower Gravel | Cal.. | 1,000,000 | 100,000 | 100 | 135,000 | Jan. | 1887 | .35 |
| 90 | Mexican, G. s | Nev.. | 10,000,000 | 100,800 | 100 | 2,590,960 | Jan. | 1887 | .25 |
| 91 | Middle Bar, G | Cal. | 400,000 | 200,000 | 2 | * | | | |
| 92 | Mine & Starr, s. L | Colo. | 1,000,000 | 200,000 | 5 | * | | | |
| 93 | Miner Boy, G. s. L | Colo. | 5,000,000 | 500,000 | 10 | * | | | |
| 94 | Miller | Nev | 5,000,000 | 200,000 | 25 | | | | |
| 95 | Moose Silver, s | Colo. | 3,000,000 | 300,000 | 10 | * | | | |
| 96 | Nachoochee, Lt., G | Ga | 1,000,000 | 200,000 | 5 | | | | |
| 97 | New Germany, G | N. S. | 100,000 | 100,000 | 1 | * | | | |
| 98 | New Pittsburg, s. L | Colo. | 2,000,000 | 200,000 | 10 | * | | | |
| 99 | North Standard, G | Cal.. | 10,000,000 | 100,000 | 100 | 20,000 | Nov | | |
| 100 | Noonday | Nev.. | 600,000 | 60,000 | 10 | 208,000 | Dec. | 1881 | .10 |
| 101 | Old Dominion, C | Ariz. | 3,000,000 | 300,000 | 10 | | | | |
| 102 | Oriental | Nev.. | 2,000,000 | 200,000 | 10 | | | | |
| 103 | Oriental & Miller, s. | Nev.. | 10,000,000 | 400,000 | 25 | | | | |
| 104 | Overman, G. s | Nev.. | 11,520,000 | 115,200 | 100 | 3,736,880 | Jan. | 1887 | .30 |
| 105 | Parrott, G | Mon. | 1,800,000 | 180,000 | 10 | | | | |
| 106 | Park, s | Utah | 2,000,000 | 200,000 | 10 | | | | |
| 107 | Peer, s | Ariz. | 10,000,000 | 100,000 | 100 | 135,000 | Nov. | 1886 | .10 |
| 108 | Peerless, s | Ariz. | 10,000,000 | 100,000 | 100 | 295,000 | Nov. | 1886 | .30 |
| 109 | Phœnix | Ariz. | 500,000 | 500,000 | 1 | | | | |
| 110 | Potosi | Nev.. | 11,200,000 | 112,000 | 100 | 1,112,000 | Nov | 1886 | .30 |
| 111 | Puritan, s. G | Colo | 1,500,000 | 150,000 | 10 | * | | | |
| 112 | Quincy | Colo. | 3,000,000 | 300,000 | 10 | | | | |
| 113 | Rappahannock, G. s. | Va.. | 250,000 | 250,000 | 1 | * | | | |
| 114 | Red Elephant, s | Colo | 500,000 | 500,000 | 1 | * | | | |
| 115 | Rollins, G. s | Colo. | 5,000,000 | 200,000 | 25 | * | | | |
| 116 | Ropes, G. s | Mich | 2,000,000 | 80,000 | 25 | 63,200 | Mar | 1886 | .10 |
| 117 | S.P. & Canon del A. C. | N.M. | 10,000,000 | 400,000 | 25 | * | | | |
| 118 | Sheridan | N. M. | 2,000,000 | 200,000 | 10 | | | | |
| 119 | Silver Cliff, s | Colo. | 5,000,000 | 400,000 | 12½ | | | | |
| 120 | Sonora Con | Mex. | 5,000,000 | 200,000 | 25 | * | | | |
| 121 | South Bulwer, G | Cal.. | 10,0 0,000 | 100,000 | 100 | 100,000 | May | 1881 | .25 |
| 122

# NEW YORK MINING STOCK QUOTATIONS.

## DIVIDEND-PAYING MINES.

| NAME AND LOCATION OF COMPANY. | Feb. 5. | | Feb. 7. | | Feb. 8. | | Feb. 9. | | Feb. 10. | | Feb. 11. | | SALES. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | H. | L. | H. | L. | H. | L. | H. | L. | H. | L. | H. | L. | |
| Alice, Mon | | | | | | | | | | | | | |
| Argenta, Nev | | | | | | | | | | | | | |
| Bassick, Colo | | | | | | | | | | | | | |
| Belle Isle, Nev | .43 | .41 | .49 | .43 | .47 | .45 | | | .40 | | .35 | | 3,800 |
| Bodie Cons., Cal | 2 10 | 2 05 | | | 2.10 | | | | | | 2 00 | | 1,150 |
| Breece | | | | | | | | | | | | | |
| Bulwer, Cal | | | | | | | | | | | | | |
| Caledonia, Dak | 1.25 | | | | | | | | | | | | 100 |
| Challar | | | | | | | | | | | | | |
| Chrysolite, Colo | | | | | | | | | .58 | | | | 100 |
| Colorado Cent'l, Colo | | | | | | | | | | | | | |
| Cons. Cal. & Va., Nev | 22.87 | 22.75 | | | 22.50 | | | | 21.13 | | 20.00 | | 600 |
| Crown Point, Nev | | | | | | | | | | | | | |
| Deadwood, Dak | 2.25 | | | | | | 2.40 | | | | 2.25 | 2.15 | 750 |
| Dunkin | | | | | | | | | | | | | |
| Eureka Cons., Nev | | | | | | | 6.50 | | 6.50 | | 7.13 | 6.75 | 360 |
| Father de Smet, Dak | | | | | | | | | | | | | |
| Freeland, Colo | | | | | | | | | | | | | |
| Gold Stripe, Cal | | | | | | | | | | | | | |
| Gould & Curry, Nev | | | | | | | | | | | | | |
| Green Mountain, Cal | | | | | | | | | | | | | |
| Hale & Norcross, Nev | | | | | | | | | | | | | |
| Homestake, Dak | 13.50 | | | | 13.50 | | | | | | | | 200 |
| Horn-Silver, Ut | 1.50 | | 1.50 | | | | 1.65 | | | | | | 850 |
| Independence, Nev | | | | | | | | | | | | | |
| Iron Hill, Dak | 2.75 | | | | 1.40 | | | | | | | | 400 |
| Iron Silver, Colo | | | | | | | | | | | | | |
| Leadville C., Colo | | | | | | | | | | | | | |
| Little Chief, Colo | .26 | | .28 | | .30 | .28 | .30 | | .31 | .30 | .31 | .29 | 2,900 |
| Little Pittsburg, Colo | | | | | | | | | | | | | |
| Moulton | | | | | 1.70 | | | | | | | | 100 |
| Navajo, Nev | | | | | 1.05 | 1.00 | 1.00 | .95 | 1.00 | .95 | .90 | | 2,550 |
| North Belle Isle, Nev | 4.75 | | 5.25 | 4.90 | 4 90 | | 5.00 | | 4 90 | 4.70 | | | 2,050 |
| Ontario, Ut | | | 25.00 | | 25.00 | | | | | | | | 200 |
| Ophir, Nev | 14.25 | | | | | | | | 12.50 | | | | 200 |
| Plymouth, Cal | 17.13 | 17.00 | | | | | | | | | | | 160 |
| Quicksilver Pref., Cal | | | | | | | | | 31.00 | 30.50 | 31.00 | | 900 |
| " Com., Cal | | | | | 6.75 | | | | | | 7.00 | | 200 |
| Robinson Cons., Colo | | | | | | | | | | | | | |
| Savage, Nev | | | | | | | | | 6 38 | | | | 100 |
| Security | 5.00 | 4.00 | 5.00 | 4 50 | 5.75 | 5.25 | 5.62 | 5 37 | 6.00 | 5.75 | 6.13 | 6.00 | 800 |
| Sierra Nevada, Nev | 6 00 | | | | 5.75 | | | | | | | | 350 |
| Silver King, Ariz | | | | | | | | | | | | | |
| Standard, Cal | | | | | | | | | | | | | |
| Stormont, Ut | | | | | .16 | | | | | | .12 | | 1,100 |
| Yellow Jacket, Nev | | | | | | | | | | | 4.85 | | 400 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

## NON-DIVIDEND-PAYING MINES.

| NAME AND LOCATION OF COMPANY. | Feb. 5. | | Feb. 7. | | Feb. 8. | | Feb. 9. | | Feb. 10. | | Feb. 11. | | SALES. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | H. | L. | H. | L. | H. | L. | H. | L. | H. | L. | H. | L. | |
| Amador | 1.30 | | 1.35 | 1 30 | 1.35 | | 1.35 | 1.23 | 1.25 | 1.20 | 1.25 | | 2,500 |
| Am. Flag, Colo | | | | | | | | | | | | | |
| Barcelona, Nev | .19 | | | | .20 | | | | | | .18 | .17 | 1,900 |
| Bechtel Con., Nev | | | | | | | | | | | | | |
| Belcher, Nev | | | | | | | | | | | | | |
| Best & B'cher Nev | 10.87 | | | | | | 9.50 | | | | | | 250 |
| Big Pittsb'g, Colo | | | | | | | | | | | | | |
| Bullion, Nev | | | | | | | | | | | | | |
| Bull-Dom'go, Colo | | | | | | | | | | | | | |
| Castle Creek, Id | .12 | | .11 | | .12 | | .12 | | .12 | | | | 4,400 |
| Central Ariz., Ariz | | | | | | | | | | | | | |
| Columbia & Beaver | | | | | | | | | | | | | |
| Cons. Imperial, Nev | | | | | | | | | | | | | |
| Con. Pacific, Cal | | | | | | | | | | .30 | | | 300 |
| Durango | | | | | | | | | | | | | |
| Decatur, Colo | | | | | | | | | | | | | |
| El Cristo, U. S. Col | 2.45 | | 2.50 | 2.45 | 2.60 | 2.35 | 2.65 | 2.60 | 2.65 | 2.60 | 2.65 | 2.55 | 13,000 |
| Gold Placer | | | | | | | | | | | | | |
| Goodshaw, Cal | | | | | | | | | | | | | |
| Harlem, Colo | | | | | | | | | | | | | |
| Helena, Mont | | | | | | | | | | | | | |
| Julia | | | | | 1.00 | | | | 1.00 | | | | 300 |
| Justice | | | | | | | | | | | | | |
| Kossuth, Nev | | | .12 | | | | | | | | | | 300 |
| Lacrosse, Colo | .12 | | | | .12 | | | | | | | | |
| Mexican, Nev | 7.75 | | | | | | | | 7.25 | | 6.63 | | 800 |
| Middle Bar | .59 | .57 | .62 | .60 | .63 | .59 | .61 | .56 | .60 | .55 | .59 | .56 | 13,300 |
| Mono, Cal | | | | | | | 2.40 | | | | | | 100 |
| New Germany | .47 | .46 | .46 | | .50 | .49 | .50 | | .50 | | .51 | .49 | 5,900 |
| New Pittsb'g, Colo | | | | | | | | | | | | | |
| North Stand'd, Cal | | | | | | | | | | | | | |
| N. Horn-Silv'r, Ut | | | | | | | | | | | | | |
| Ori'nt'l&Mil'r, Nev | | | .18 | .16 | .18 | .17 | .18 | | | | .17 | | 3,200 |
| Phœnix | 8.87 | 8.62 | 9.13 | 8.75 | 9.00 | 8.87 | 7.50 | 7.25 | 7.00 | 6.50 | 6.25 | 5.50 | 2,300 |
| Potosi, Nev | | | | | | | | | | | | | |
| Rappahann'k, Va | .15 | | .16 | | .16 | | .17 | | .15 | | .17 | .16 | 7,800 |
| Red Eleph't, Colo | .06 | | .06 | | | | .05 | | | | | | 2,200 |
| " 2 and 3 | | | | | | | | | | | | | |
| Silver Cliff, Colo | .20 | .18 | .13 | .09 | .13 | .05 | .17 | .12 | .17 | .15 | .16 | .15 | 29,800 |
| Silver Hill | | | | | | | | | | | | | |
| Sonora Con., Mex | | | | | | | | | | | | | |
| Stanislaus, Cal | | | 1.05 | | 1.90 | | | | 1.90 | | 1.95 | | 900 |
| State L'e, 1 & 4, Nev | | | | | | | | | .04 | .03 | | | 1,100 |
| " Nos. 2 & 3, Nev | | | | | | | | | .04 | .03 | | | 400 |
| Sutro Tunnel, Nev | .23 | | .23 | .21 | .20 | | .20 | | .21 | .20 | .22 | .21 | 25,800 |
| Taylor Plumas, Cal | | | .10 | | .10 | | .10 | .08 | .09 | | .08 | | 10,800 |
| Tioga, Cal | | | | | | | | | | | | | |
| Unadilla, Colo | | | | | | | | | | | | | |
| Union Cons., Nev | 5.25 | | | | | | | | | | | | 200 |
| Utah Cent | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

# BOSTON MINING STOCK QUOTATIONS.

| NAME OF COMPANY. | Feb. 4. | | Feb. 5. | | Feb. 7. | | Feb. 8. | | Feb 9. | | Feb. 10. | | SALES. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Amie | | | | | | | | | | | | | |
| Allouez | 2.00 | | 2.00 | | 2.00 | | 2.00 | | 2.00 | | 2.00 | | 900 |
| Atlantic | | | | | | | | | | | | | |
| Bodie | | | | | | | | | | | | | |
| Bonanza D | 1.50 | | 1.50 | | 1.50 | | 1.62 | | | | 1.62 | | 850 |
| Boston & Montana | | | | | | | | | | | | | |
| Breece | | | | | | | | | | | | | |
| Calumet & Hecla | 211 | 210 | | | 212 | | 212½ | 212 | 212¼ | | 212½ | | 38 |
| Catalpa | | | | | 32½ | | 32½ | | 32½ | | 32½ | | 1,200 |
| Central | | | | | | | | | | | | | |
| Chrysolite | | | .61 | | | | | | .65 | | | | 200 |
| Con. Virginia | | | | | | | | | | | | | |
| Dunkin | .35 | | .34 | | .36 | | .36 | | .36 | | | | 1,215 |
| Eureka | | | | | | | | | | | | | |
| Franklin | 12.50 | | | | 13.00 | 12.75 | 13.00 | | 12.75 | 12.25 | 13.00 | | 301 |
| Freeland | | | | | | | | | | | | | |
| Honorine | | | | | | | | | | | | | |
| Kearsarge | | | | | | | | | | | | | |
| Little Chief | | | .27½ | | | | | | | | | | 100 |
| Osceola | 22.00 | | 22.00 | | 22.00 | | 22.25 | | 22.50 | 22.25 | 22.25 | | 265 |
| Pewabic | | | | | | | | | | | | | |
| Quincy | 54 00 | | | | 54.00 | 53.00 | | | 54.00 | 53¼ | 53.75 | | 73 |
| Robinson | | | | | | | | | | | | | |
| Security | | | | | 11.75 | | 4.75 | | 6.00 | | 6.00 | | 820 |
| Silver King | | | 7.50 | | | | | | | | | | 50 |
| Standard | | | | | | | | | | | | | |
| Stormont | .12 | | | | .12 | | .12 | | .12 | | | | 800 |

| NAME OF COMPANY. | Feb. 4. | | Feb. 5. | | Feb. 7. | | Feb. 8. | | Feb. 9. | | Feb. 10. | | SALES. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alma | | | 4.18 | | | | | | | | | | 2,000 |
| Arnold | | | | | | | | | | | | | |
| Bijou | | | | | | | | | | | | | |
| Blue Ridge | .21 | | .21 | | .21 | | .20 | | .22 | | .22 | | 2,650 |
| Bowman Silver | .08 | | .08 | | .08 | | .08 | | | | | | 5,700 |
| Cliff | | | 3.91 | | | | | | | | | | 2,000 |
| Con. Pacific | | | | | | | | | | | | | |
| Crescent | | | | | | | | | .12 | | | | 200 |
| Cusi | | | | | | | | | | | .45 | | 500 |
| Edna | | | 3 64 | | | | | | | | | | 1,000 |
| Fern | | | 4.34 | | | | | | | | | | 1,000 |
| Gem | | | 4.62 | | | | | | | | | | 1,000 |
| Humboldt | | | | | | | | | | | | | |
| Huron | | | | | | | | | | | 1.87 | | 100 |
| Lima | | | 3.82 | | | | | | | | | | 1,000 |
| Mesnard | | | | | | | .25 | | | | | | 400 |
| Mona | | | 4.14 | | | | | | | | | | 1,000 |
| Napa | | | | | | | 1.00 | | | | 1.00 | | 500 |
| Ora | | | 3.86 | | | | | | | | | | 1,000 |
| Oriental & Miller | .18 | | | | | | .18 | | .18 | | .18 | | 1,800 |
| Plato | | | 3 96 | | | | | | | | | | 1,000 |
| Ridge | | | | | | | | | | | | | |
| Rappahannock | .15 | | | | | | | | | | | | 500 |
| Sutro Tunnel | | | | | | | | | | | | | |
| Tamarack | | | | | | | | | | | 99 | 96½ | 7 |
| Ute | | | 3.54 | | | | | | | | | | 1,000 |
| Washington | .05 | | | | | | | | | | | | 1,000 |

New York: Dividend shares sold, 20,320. Non-dividend shares sold, 128,050. Total New York, 148,370.
Boston: Dividend shares sold, 6,812. Non-dividend shares sold, 24,757. Total Boston, 31,569.

# COAL STOCKS.

| NAME OF COMPANY. | Par value of shares. | Feb. 5. | | Feb. 7. | | Feb. 8. | | Feb. 9. | | Feb. 10. | | Feb. 11. | | Sales. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | H. | L. | H. | L. | H. | L. | H. | L. | H. | L. | H. | L. | |
| Barclay Coal | | | | | | | | | | | | | | |
| Cameron Coal | 50 | 48¼ | 47½ | 47¾ | 47⅝ | 48⅛ | 47¾ | 48½ | 48 | 47⅞ | 47 | 47¼ | | 6,620 |
| Col., C. & I | 100 | 37⅞ | 37 | 37½ | 37¼ | 37½ | 37¼ | 38¾ | 37¾ | 39¼ | 39 | 39 | 38⅝ | 5,052 |
| Ches. & O. RR | 100 | | | 9 | | | | | | 8½ | | | | 110 |
| Chicago & Indiana Coal | | | | | | | | | | | | | | |
| Consol. Coal | 100 | | | | | | | | | | | | | |
| Cumb. C. & I | 100 | | | | | | | | | | | | | |
| Del. & H. C | 100 | 102¾ | 102 | 102¾ | 102 | 102⅝ | 102¼ | 103 | 102½ | 103⅜ | 103 | 103½ | 103 | 6,835 |
| D., L. & W. RR | 50 | 135¾ | 134⅝ | 135¾ | 134¾ | 136⅞ | 135⅛ | 136½ | 135⅝ | 137 | 136⅜ | 137¼ | 136⅜ | 119,050 |
| Elk Lick Coal Co | | | | | | | | | | | | | | |
| Hocking Valley | 100 | 37½ | 36⅜ | 37⅛ | 36⅞ | 36⅞ | 36⅝ | 37 | 36¾ | 37¾ | 37 | 37 | 36½ | 6,997 |
| Lehigh C. & N.† | 50 | 50¾ | 50½ | 50¾ | 50½ | | | 51 | 50¾ | 51 | 50¾ | | | 937 |
| Lehigh Valley RR.† | 50 | 56¼ | 56⅛ | 56¼ | 56⅛ | 56⅛ | | 56⅛ | | 56¼ | 56 | | | 744 |
| L. & W. C. & I. Co | | | | | | | | | | | | | | |
| Maryland Coal | 100 | | | | | | | | | | | 15 | | 100 |
| Montauk Coal | 100 | | | | | | | | | | | | | |
| Morris & Essex | 50 | | | | | 140 | | | | 41 | | 141¾ | 141⅛ | 420 |
| New Central Coal | 100 | | | | | 15 | | 16 | | 17 | 16½ | 17 | | 1,210 |
| N. J. C. RR | 100 | 67⅝ | 66¾ | 67 | 66 | 67½ | 66½ | 70 | 67 | 70⅞ | 69⅛ | 70⅜ | 69¼ | 54,421 |
| N. Y. & S. Coal | 50 | | | | | | | | | | | | | |
| N. Y., Susq. & Western | 100 | 11⅞ | 11¾ | 11⅞ | 11¼ | 12 | 11⅞ | 12¼ | 12 | 12¼ | | 12⅜ | 12 | 5,320 |
| Do. pref | 100 | 33 | 32⅛ | 33¾ | 33¼ | 33⅝ | 33 | 33⅞ | 33⅜ | 34⅛ | 33⅜ | 34⅞ | 33½ | 8,845 |
| N. Y. & Perry C. & I | 100 | 70¼ | | | | 70¼ | 69 | 70¼ | 70⅛ | 70¼ | | 70 | 69½ | 2,200 |
| Norfolk & Western R R | 100 | 19 | 18¾ | 20½ | 19¾ | 20 | | 21 | 20 | 22 | 21¾ | 22 | 21½ | 2,280 |
| Do. pref | 100 | 47¼ | 45½ | 48¼ | 47⅛ | 48⅜ | 7⅞ | 49 | 47⅛ | 49¾ | 49½ | 49 | 48⅛ | 22,230 |
| Penn. Coal | 50 | | | | | | | | | | | | | |
| Penn. RR.† | 50 | 55⅛ | 54⅝ | 55⅜ | 55 | 55⅜ | 55 | 55¾ | 55⅛ | 56⅛ | 56½ | | | 11,661 |
| Ph. & R. RR.* | 50 | 36¾ | 35¾ | 37½ | 35⅞ | 38⅝ | 36¾ | 39 | 37⅞ | 39¼ | 38⅛ | 38⅝ | 37⅝ | 433,064 |
| Spring Mountain | 50 | | | | | | | | | | | | | |
| Tennessee C. & I. Co | 100 | 46½ | 45¾ | 48 | 47¾ | 48¼ | 48 | 48¾ | 48⅛ | 49¼ | 48¾ | 48½ | | 3,110 |
| Westmoreland Coal† | 50 | | | | | | | | | | | | | |

* Of the sales of this stock, 65,279 were in Philadelphia, and 367,785 in New York.
† The quotations for these stocks are not percentage, but actual price.

Total sales, 692,206.

## San Francisco Mining Stock Quotations.

| COMPANY. | CLOSING QUOTATIONS. Feb. 4. | Feb. 5. | Feb. 7. | Feb. 8. | Feb. 9. | Feb. 10. |
|---|---|---|---|---|---|---|
| Albion | | | | | | |
| Alpha | | | | | | |
| Alta | 1.62½ | 1.75 | 1.62½ | 1.25 | 1.25 | |
| Argenta | | | | | | |
| Bechtel | | | | | | |
| Belcher | | | | | | |
| Belle Isle | | | | | | |
| Best & Belcher | 10.00 | 10.50 | 9 87½ | 9.37½ | 10 00 | 9.50 |
| Bodie | 1.87½ | | 1.87½ | 2.00 | 2.00 | 2.00 |
| Bulwer | 1.12½ | 1.12½ | 1.25 | 1.25 | 1.12½ | 1.25 |
| Challar | 7.75 | 7.75 | 7.87½ | 7.00 | 7.75 | 7.25 |
| Con. Cal. & Va | 21.50 | 21.75 | 21.25 | 19.50 | 20.50 | 19.00 |
| Con. Pacific | | | .30 | .25 | | |
| Crown Point | 4.00 | 4.00 | 4.00 | 3.75 | 3.75 | 4.50 |
| Eureka Cons | | | | 6.12½ | 7.00 | |
| Gould & Curry | 5.37½ | 5.25 | 5.00 | 4.50 | 5.00 | 5.25 |
| Grand Prize | | | | | | |
| Hale & Norcross | 6.25 | 5.87½ | 6.25 | 5.25 | 5.75 | 6.25 |
| Martin White | | | | | | |
| Mexican | 5.87½ | 7.12½ | 6.50 | 6.12½ | 6.75 | 6.25 |
| Mono | 2.12½ | 2.25 | 2.25 | 2.50 | 2.50 | 2.50 |
| Mount Diablo | | | 4.00 | 4.00 | 4 00 | |
| Navajo | .60 | .60 | 1.12½ | 1.00 | 1.00 | |
| Northern Belle | | | | | | |
| North Belle Isle | | | | | | |
| Ophir | 12⅝ | 13.00 | 12.25 | 11.25 | 12½ | 11⅝ |
| Potosi | 8.87½ | 9.00 | 9.00 | 7.87½ | 8 50 | |
| Savage | 6.00 | 6.25 | 6.12½ | 5.62½ | 6.00 | 5.50 |
| Scorpion | | | | | | |
| Sierra Nevada | 5.25 | 5.37½ | 5.25 | 4.87½ | 5.12½ | 4.50 |
| Sutro Tunnel | | | | | | |
| Tip Top | | | | | | |
| Union Cons | 4.50 | 4.75 | 4.50 | 3.37½ | 4.50 | 4.25 |
| Utah | 6.50 | 6.00 | 6.50 | | 6.00 | |
| Yellow Jacket | 5.25 | 5.00 | 5.25 | 4.75 | 4.50 | 4.50 |

gard to the affairs of the company as the stockholders then present or represented may determine upon.

**Dividends.**

New Central Coal Company, of Maryland, has declared a dividend of $1 a share, payable March 1st.

Philadelphia Natural Gas Company, of Pennsylvania, has declared a dividend of one per cent, payable February 20th.

ASSESSMENTS.

| COMPANY. | No. | When levied. | Delinquent in office. | Day of sale. | Amount. |
|---|---|---|---|---|---|
| Alpha, Nev. | 29 | Jan. 12 | Feb. 17 | Mar. 10 | .50 |
| Alta, Nev. | | Feb. 9 | | | .50 |
| American, Nev. | 1 | Jan. 31 | Mar. 8 | Mar. 31 | .05 |
| Benton Cons., Nev. | 17 | Jan. 28 | Mar. 4 | Mar. 24 | .25 |
| Bodie, Cal | 6 | Jan. 24 | Feb. 28 | Mar. 28 | .50 |
| Bullion, Nev. | 32 | Jan. 22 | Mar. 1 | Mar. 17 | .40 |
| Bunker Hill Cons., Cal | 17 | Nov. 30 | Jan. 10 | Feb. 15 | .70 |
| Cambria, Cal. | 2 | Jan. 17 | Feb. 21 | Mar. 16 | .40 |
| Camp Creek Placer, Cal | 1 | Jan. 20 | Mar. 10 | Apl. 14 | .10 |
| Columbus Cons., Nev. | 5 | Dec. 22 | Jan. 27 | Feb. 18 | .50 |
| Goiconda, Cal. | 2 | Dec. 22 | Jan. 27 | Feb. 16 | .03 |
| Golden Fleece, Cal. | 8 | Jan. 27 | Mar. 8 | Mar. 28 | .10 |
| Hazard, Cal. | 1 | Jan. 26 | Mar. 1 | Mar. 22 | .03 |
| Hubert Concentrator, Cal. | 1 | Jan. 17 | Feb. 20 | Mar. 14 | .10 |
| Keokuk, Dak. | 3 | Dec. 20 | *Mar. 1 | *Apl. 1 | ¼ |
| Kincaid Flat, Cal | | Jan. 5 | Feb. 14 | Mar. 7 | 2.00 |
| Lady Washington, Nev. | 6 | Jan. 28 | Mar. 7 | Mar. 28 | .25 |
| Lone Jack, Cal. | 1 | Jan. 27 | Mar. 7 | Mar. 28 | .05 |
| Manhattan, Nev. | 4 | Feb. 2 | Mar. 7 | Mar. 22 | 1.00 |
| May Flower, Cal. | 34 | Jan. 19 | Feb. 28 | Mar. 18 | .25 |
| Mexican, Nev. | 33 | Jan. 4 | Feb. 9 | Mar. 2 | .25 |
| Navajo, Nev. | 16 | Jan. 7 | Feb. 10 | Mar. 3 | .25 |
| Nevada Queen, Nev. | 1 | Jan. 4 | Feb. 8 | Mar. 3 | .30 |
| North Belle Isle, Nev | 11 | Jan. 12 | Feb. 15 | Mar. 9 | .50 |
| North Comstock, Nev | | Jan. 14 | | | .10 |
| Occidental, Nev | | Feb. 3 | | | .40 |
| Phœnix Cons., Cal. | 2 | Jan. 26 | Mar. 5 | Mar. 28 | 1.40 |
| Pneumatic, Cal. | 2 | Jan. 4 | Feb. 14 | Mar. 8 | .20 |
| Sampson, Utah | | Dec. 17 | Jan. 31 | Feb. 28 | .25 |
| Sierra Nevada, Nev. | 87 | Jan. 4 | Feb. 9 | Mar. 1 | .25 |
| Silver Eagle, Nev. | 1 | Jan. 18 | Feb. 18 | Mar. 21 | .05 |
| South Fork, Cal | 43 | Dec. 15 | Jan. 15 | Feb. 15 | 1.00 |
| Utah, Nev. | | Jan. 25 | | | .50 |
| West Galena, Dak. | 5 | June 5 | *Jan 29 | *Feb 19 | ¼ |

* The delinquent day and the day of sale were postponed to dates given above

**St. Louis Mining Stocks.** Feb. 9.

[From our Special Correspondent.]

The market this week was quiet and featureless. The late developments in the Sheridan mine have cast a damper, for the time being, on all transactions in mining shares. Granite has remained steady, with, however, very few sales. The so-called fancies have fluctuated wildly, Sheridan selling down to 15c. and up to 35c., other shares in nearly the same proportion. Adams has been somewhat firmer, after selling at $2, closing at $2.65. Take it all together, however, the past week has been as dull a one as we have had for months, and there are no apparent signs of an early revival of active trading.

| COMPANY. | Location. | Bid. | Asked. |
|---|---|---|---|
| Adams, s. L | Colo. | $2.65 | $2.75 |
| Bi-Metallic, s. | Mont. | | |
| Bremen. | N. Mex. | 1.10 | 1.50 |
| Cen. Continental, G. s. | Ark. | | |
| Cleveland | Colo. | 17½ | .20 |
| Consolidated Silver, s. | Mo. | | .35 |
| Courtland | Colo. | | |
| Dandy, s. | Colo. | | |
| Durango, T. | Mex | | |
| Grand Duke | Colo. | | |
| Granite Mountain, s. | Mont. | 65.00 | 66.00 |
| Hope, s | Mont. | *4.75 | *4.90 |
| Ideal, s. L | Colo. | .35 | .40 |
| Iron Gold and Silver | N. Mex | | .07½ |
| Laclede | N. Mex. | | .07½ |
| Peacock | N. Mex. | 1.50 | 1.75 |
| Puritan. | Colo. | | .25 |
| Quincy | Colo. | | .05 |
| Sheridan | N. M. | .22½ | .35 |
| Small Hopes Cons., s. L. | Colo. | 9.00 | 9.50 |
| St. Louis & Mex. Imp. | Mex | 1.40 | 1.50 |
| St. Louis & San Fran | Mex. | | |
| St. Louis & Sonora, G. s. | Mex | | .20 |
| St. Louis & St. Elmo. | Colo | | .40 |
| St. Louis & Yavapai | Ariz | .85 | .90 |
| West Granite, s | Mont. | | |

* New stock. Par value, $10.

[From an Occasional Correspondent.]

There has been quite a break in the St. Louis mining stock market, and the bubbles are bursting, but there is nothing discouraging in this; on the contrary, the legitimate enterprises will in the end benefit by the lesson the bursting of the bubbles will teach.

Mining is not only a legitimate but an exceedingly lucrative industry, and on this account when an interest has been excited by the immense profits made by good mines, the occasion is used to float all kinds of worthless enterprises on those who are foolish enough to gamble or "invest" without any real knowledge of the nature of the property they are purchasing.

St. Louis has been very fortunate in the control of several excellent mining properties, the Granite Mountain, the Hope, and other good properties, and it was to be expected that a lot of cats would creep in under their shadow; now it appears some of these have been exposed, and the whole litter is being pursued. The good mines hold their own, and honest enterprises will ultimately be benefited by the fall in prices, even though temporarily some of them may suffer.

**Pittsburg Stock Quotations.**

Feb. 9.

| COMPANY. | H. | L. | Closing |
|---|---|---|---|
| Allegheny Heating Company | $113½ | $112½ | $112½ |
| Bridgewater Gas Company | 120 | 119 | 119 |
| Chartiers Block Coal Company | 40 | 40 | 40 |
| Chartiers Valley Gas Company | 94 | 90 | 93 |
| Forest Oil Company | | | |
| Hazelwood Oil Company | | | |
| La Noira Mining Company | 2½ | 2½ | 2½ |
| Natural Gas Company of West Va | 100 | 95 | 100 |
| New York & Clevela'd Gas Coal Co | | | |
| Philadelphia Company | 57½ | 56½ | 57 |
| Pennsylvania Gas Company | 30 | 30 | 30 |
| Silverton Mining Company | | | |
| Westinghouse Air-Brake Co | 99 | 98½ | 99 |
| Westinghouse Electric Company | 100 | 100 | 100 |
| Wheeling Natural Gas Company | *68 | 47 | 47 |
| Yankee Girl Mining Company | 7 | 7 | 7 |

Highest and lowest prices during the week.
* Old stock.

**Gogebic Iron Stocks.**

The Gogebic stocks continue to attract great attention, especially in Milwaukee, Chicago, and Cleveland. The Gogebic mines are magnificent, and can undoubtedly ship 1,500,000 tons of ore this season, with an average profit of probably $1.50@$2 per ton. Many of the stocks are quoted far beyond their intrinsic value, and not a few are altogether worthless, so that investors should exercise care in purchasing.

The published circular quotations reflect special interests, and are, therefore, in many instances, the prices hoped for rather than those of the general market.

| NAME. | No. of shares. | Par value. | Present value. |
|---|---|---|---|
| Aurora | 40,000 | $25.00 | $50.00 |
| Anvil | 40,000 | 25.00 | 6.00 |
| Amazon | 40,000 | 25.00 | 4.00 |
| Ashland | 40,000 | 25.00 | 32.00 |
| Agogebic | 40,000 | 25 00 | 2.00 |
| Atlantic | 40,000 | 25.00 | 7.00 |
| Bonnie | 40,000 | 25.00 | 10.00 |
| Blue Jacket | 40,000 | 25.00 | 10.00 |
| Black River (fee) | 20,000 | 25.00 | 20.00 |
| Bessemer | 20,000 | 25.00 | 10.00 |
| Brotherton | 80,000 | 25.00 | 5.50 |
| Bourne | 40,000 | 25.00 | 4.25 |
| Crown Point | 100,000 | 25.00 | 2.00 |
| Caledonia | 40,000 | 25.00 | 3.25 |
| Colby (See Penokee & G. D. Co.) | | | |
| Emma | 40,000 | 25.00 | 3.25 |
| Father Hennepin (Kennon) | 40,000 | 25.00 | 3.00 |
| First National (and Old Geneva) | 80,000 | 25.00 | 7.50 |
| Germania | 40,000 | 25.00 | 13.00 |
| Gogebic Iron Syndicate | 200,000 | 25.00 | 4.75 |
| Gogebic Realty and Iron Co. (fee) | 40,000 | 25.00 | 5.00 |
| Gogebic | 40,000 | 25.00 | 3.15 |
| Iron King | 40,000 | 25.00 | 17.50 |
| Ironton | 40,000 | 25.00 | 12.00 |
| Iron Prince | 40,000 | 25.00 | 4.00 |
| Ironsides | 40,000 | 25.00 | 4.00 |
| Iron Chief | 40,000 | 25.00 | 6.00 |
| Kakagon | 40,000 | 25.00 | 13.00 |
| Laura | 40,000 | 25.00 | 3.00 |
| Lottie | 20,000 | 25.00 | |
| Montreal | 20,000 | 25.00 | 27.00 |
| Moore | 40,000 | 25.00 | 4.00 |
| Minnewawa | 40,000 | 25.00 | 5.00 |
| Mayflower | 40,000 | 25.00 | 1.00 |
| Nimikon | 40,000 | 25.00 | 10.00 |
| Northern Chief (fee) | 30,000 | 00.00 | 100.00 |
| Norway | 20,000 | 25.00 | |
| Norrie | 30,000 | 25.00 | 30.00 |
| Odanah (disputed) Puggawagan | 20,000 | 25.00 | 9.50 |
| Old Nokomis | 40,000 | 25.00 | 2.00 |
| Pabst | 250 | 100.00 | |
| Puritan | 40,000 | 25.00 | 20.00 |
| Pence & Snyder Iron Dev. Co | 100,000 | 25.00 | 5.00 |
| Pence | 40,000 | 25.00 | 5.00 |
| Penokee & Gogebic Dev. Co | 5 000 | 100.00 | 400.00 |
| Ryan | 40,000 | 25.00 | 6.00 |
| Superior | 100,000 | 10.00 | 3.00 |
| Section 33 Co | 20,000 | 25.00 | 8.50 |
| Sunday Lake | 40,000 | 25.00 | 7.00 |
| Snider | 40,000 | 25.00 | 5.00 |
| Trimble | 40,000 | 25.00 | 8.00 |
| Tontine | 40,000 | 25.00 | 5.00 |
| Union | 40,000 | 25.00 | 3.50 |
| Valley | 120,000 | 25.00 | 5.00 |

**Boston Copper and Silver Stocks.**

[From our Special Correspondent.]

BOSTON, Feb. 10.

There is not much to be said regarding the market for copper stocks the past week. The dealings have been very light and entirely confined to the dividend-paying stocks, which show a good degree of firmness in view of recent events; and while we do not look for any great degree of activity in the near future, we do not look for much decline, and believe that, in the long run, good stocks purchased now will show handsome profits before many months. Calumet & Hecla is the strongest stock on the list, and advanced from $210@$212½, and closed to-day at $213 bid, $215 asked. Quincy continues firm, with sales at $54, but offered at $53½ at close to-day. Franklin is strong, with small sales at $13, and later at $12¾. There is no pressure to sell it, and it must go higher. Osceola holds its own well, and shows a slight advance over last week; sales at $22½@$22¼. A sale of two shares of Tamarack at $99 is reported, followed, however, with sale of five shares at $96½, closing at $95 bid. Of the speculative list, a sale of 400 shares of Mesnard at 25c., and 1000 shares Washington at 5c., comprise all the transactions recorded.

In the silver stocks, there is but little doing. Bonanza sold at $1¼. Bowman sold at 8c. Catalpa, 32½c. Dunkin, 35@36c. "Cusi," 40c. bid. The market is so narrow that quotations are merely nominal.

**Pipe Line Certificates.**

The following table gives the quotations and sales at the Consolidated Stock and Petroleum Exchange:

| | Opening. | Highest. | Lowest. | Closing. | Sales. |
|---|---|---|---|---|---|
| Feb. 5 | 66¾c. | 66¾c | 62½c. | 63¾c. | 5,757,000 |
| 7. | 63¾ | 64 | 62½ | 63⅛ | 2,829,000 |
| 8. | 63 | 63⅜ | 61¾ | 62 | 2,682,000 |
| 9. | 62 | 63⅞ | 61⅞ | 63½ | 2,661,000 |
| 10. | 63¾ | 64⅛ | 63 | 64 | 1,923,000 |
| 11. | 64 | 64⅛ | 63⅜ | 63⅝ | 1,722,000 |
| Total sales in barrels | | | | | 17,574,000 |

**FREIGHTS.**

The latest actual charters to February 11th, per ton of 2240 pounds:

| To | From Philadelphia | From Baltimore. | From New York shipping ports. |
|---|---|---|---|
| Alexandria | 1.10 | | |
| Annapolis | | | |
| Baltimore | .60§ | | |
| Bangor | | | |
| Bath, Me. | | | |
| Beverly | | | |
| Boston, Mass. | 2.00* | 2.00 | 1.50* |
| Bridgeport, Conn. | | 1.85 | |
| Bristol | | | |
| Brooklyn | | 1.75 | |
| Cambridge, Mass. | | | |
| Cambridgeport | | | |
| Charleston, S. C. | 1.05@1.10 | 1.15 | |
| Charlestown | | | |
| Chelsea | 2.00* | | |
| City Point | | | |
| Com. Pt., Mass. | | | |
| E. Boston | 2.00* | | |
| East Cambridge | | | |
| E. Gr'nwich, R. I. | | | |
| Fall River | | 1.85 | |
| Galveston | | 2.75@3.00 | |
| Gardner | | | |
| Georgetown, D. C. | 1.10 | | |
| Gloucester | 1.05* | | |
| Hoboken | | | |
| Jersey City | | | |
| Lynn | | | |
| Marblehead | | | |
| Milton | | | |
| Newark | | | |
| New Bedford | 1.75* | 1.85 | |
| New-Berne | | | |
| Newburyport | | | |
| New Haven | | 1.85 | 1.00 |
| New London | | 1.85 | |
| New Orleans | | | |
| New York | | 1.75 | |
| Newark, N. J. | | | |
| Newport | | | |
| Norfolk, Conn | | | |
| Norfolk, Va. | 1.00 | | |
| Norwich | | | 1.00@1.20 |
| Norwalk, Conn | | | |
| Pawtucket | | | |
| Portland, Me. | 2.00* | 2.75 | 1.50* |
| Port Royal, S. C. | | | |
| Portsmouth, N. H. | | 2.10 | |
| Portsmouth, Va. | | | |
| Providence, R. I. | 1.70@1.75* | 1.85 | 1.00@1.25 |
| Quincy Port | | | |
| Richmond, Va. | 1.50 | | |
| Rockport | | | |
| Roxbury, Mass. | | | |
| Saco | | | |
| Salem, Mass. | 2.00* | 2.00 | 1.50* |
| Savannah | 1.00 | 1.50 | |
| Somerset | | 1.85 | |
| Washington | | | |
| Williamsb'g, N. Y. | | 1.00@1.25 | |
| Wilmington, Del | | | |
| Wilmington, N. C. | | 1.75 | |

* And discharging. † And discharging and towing. 3c. per bridge extra. § Alongside. ‖ And towing up and down. ¶ And towing. †† Pilotage. ** Below bridge. *** Old B. L.

BILLINGS, SHELDON & CO.,
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